

# LEATH & ROSS'S HOMOEOPATHIC PHARMACIES

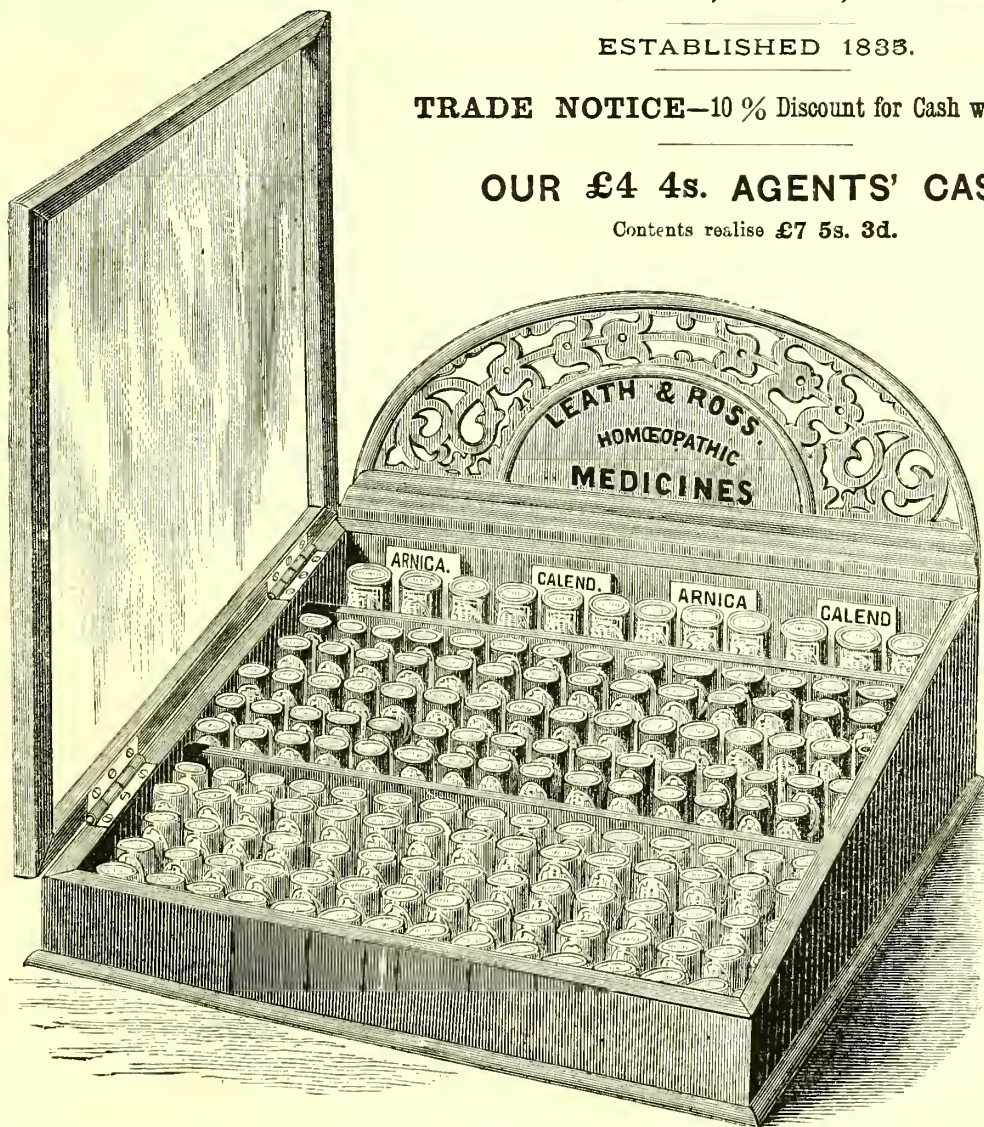
9 VERE STREET, W.,  
and 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

ESTABLISHED 1833.

TRADE NOTICE—10 % Discount for Cash with Orders.

OUR £4 4s. AGENTS' CASE,

Contents realise £7 5s. 3d.



Upwards of 1,600 of these Cases have been sent out.  
DIMENSIONS.—Length, 19 inches; breadth, 16 inches; height of front, 3½ inches;  
height of back, including flap, 11 inches.

## WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

	TO ACCOUNT.	FOR CASH.		TO ACCOUNT.	FOR CASH.
BOULES.—Sixpenny Tubes ...	3/0 doz.	2/9 doz.	PILULES.—Sixpenny Bottles ...	3/0 doz.	2/9 doz.
Ninepenny " ...	4/6 "	4/1 "	Ninepenny " ...	4/6 "	4/1 "
Shilling " ...	6/0 "	5/5 "	Shilling " ...	6/0 "	5/5 "
CTURES.—Sixpenny Bottles ...	3/0 "	2/9 "	TRITURATIONS.—Sixpenny Bottles	4/0 "	3/7 "
Ninepenny " ...	4/6 "	4/1 "	Ninepenny " ...	4/6 "	4/1 "
Shilling " ...	6/0 "	5/5 "	Shilling " ...	6/0 "	6/5 "

Liberal supply of printed matter to Agents, also Showcards, Transparencies, &c.



**SEVEN HIGHEST AWARDS**—Philadelphia, 1876; Paris, 1878; International Medical Exhibition, London, 1881.

"Greatly superior to the preparations in common use."—THE LANCET.

# VASELINE SOAPS.

EMOLLIENT, ANTISEPTIC, HEALING.

Three Styles.	{	<b>VASELINE, SUPERFINE TOILET,</b>	One size, 1s. per tablet.
		<b>VASELINE, FAMILY TOILET,</b>	Two sizes, 6d. and 9d. per tablet.
		<b>VASELINE TAR,</b>	Two sizes, 6d. and 9d. per tablet.

The "VASELINE" TAR SOAP is the pleasantest and most effective combination of Tar for all Skin Diseases and Irritations, and a delightful Toilet article. The only genuine Tar Soap made.

The use of Lard, &c., as a basis for all ointments is now discarded by Medical Men, and "VASELINE" *only* is used for the purpose. "VASELINE," as is well known, possesses the most powerful inherent healing properties, is the best Emollient known to science, and will never become rancid: it is therefore the natural and only true basis for Soaps.

## PREPARATIONS FOR MEDICINAL AND PHARMACEUTICAL USE.

<b>"VASELINE" (PURE).</b>	In 1-oz., 2-oz., and 5-oz. bottles, and in $\frac{1}{2}$ -lb., 1-lb., and 5-lb. tins.
<b>"CAMPHORATED VASELINE."</b>	In 2-oz. and 4-oz. bottles.
<b>"CARBOLATED VASELINE."</b>	" " and in 1-lb. tins.
<b>"WHITE VASELINE."</b>	In 1-lb. and 5-lb. tins.
<b>"VASELINE CONFECTIONS."</b>	In fancy tin box, one size, 1s. each.
<b>"VETERINARY VASELINE."</b>	In $\frac{1}{2}$ -lb., 1-lb., and 5-lb. tins.
<b>"VASELINE OIL."</b>	In 8-oz. bottles and 5-lb. tins.

## FOR TOILET USE.

<b>"POMADE VASELINE."</b>	In 2-oz. and 5-oz. bottles. Also white in coloured glass-stoppered bottles.
<b>"VASELINE HAIR TONIC."</b>	One size, price 4s. each.
<b>"VASELINE COLD CREAM."</b>	In glass pots, 9d. and 2s.
<b>"VASELINE CAMPHOR ICE."</b>	In fancy tin box, one size, 6d. each.
<b>"VASELINE TOILET SOAP."</b>	As above, 6d., 9d. and 1s. tablets. Boxes of 6 and 3 tablets.
<b>"VASELINE TAR SOAP."</b>	" 6d. and 9d. tablets. " "

## SUNDRY PREPARATIONS.

<b>"VASELINE ANTI-CORROSIVE PASTE."</b>	One size, tin box, 6d. each.
<b>"VASELINE BOOT PASTE."</b>	" " "
<b>"VASELINE HARNESS PASTE."</b>	In 1-lb. tins, 1s. 6d.
<b>"VASELINE AXLE PASTE."</b>	" "
<b>"VASELINE" (PURE).</b>	In Metal Collapsible Cases, for Bicyclists and Sportsmen's Use. 6d. each.

NOTICE.—The above only Genuine in our Packages. The BOTTLED GOODS are put up in Cardboard Cases.

MANUFACTURED ONLY BY THE

**CHESEBROUGH MANUFACTURING CO.**  
(NEW YORK),

41 HOLBORN VIADUCT, LONDON, E.C.

REGISTERED TRADE MARKS

# NOTICE OF REMOVAL.

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**J. HART & SON,**

Sponge Importers, of Houndsditch,

Have REMOVED to more Extensive Premises, situated at

**54 & 55 ALDERSGATE STREET,**

*NEARLY OPPOSITE THE MANCHESTER HOTEL.*

---

Having a very large and varied Stock of carefully selected

**SPONGES**

on hand, which they offer at a very small profit, an inspection  
by the Trade is respectfully solicited.

---

**J. HART & SON,**

SPONGE IMPORTERS,

**54 & 55 ALDERSGATE STREET,**

**LONDON, E.C.**



# PAPIER-MOURE,

## OR FRENCH CHEMICAL FLY PAPER.

Per Thousand Sheets	...	...	...	...	...	...	...	21s. 0d.
Packets containing 5 Sheets (3d.), per dozen	...	...	...	...	...	...	...	1s. 6d.
Packets containing 10 Sheets (6d.),	..	..	..	..	..	..	...	3s. 0d.
10 per cent., and 5 per cent. Cash Monthly.								

# INSECTICIDE-VICAT.

In Bottles	...	...	...	...	...	per dozen,	3s. 9d. and 7s. 6d.
In Bellows Boxes	...	...	...	...	..	3s. 9d.	
In Tin Bellows	...	...	...	...	..	7s. 6d.	
10 per cent., and 5 per cent. Cash Monthly.							

*SPECIAL QUOTATIONS TO WHOLESALE BUYERS.*

SOLE WHOLESALE AGENTS:

**S. MAW, SON & THOMPSON. LONDON**

HIGHEST AWARDS | **GOLD & SILVER MEDALS** | WHEREVER EXHIBITED.

The Annually increasing demand for GLACIALINE, both at Home and Abroad, clearly establishes it as the BEST and most EFFECTIVE PRESERVATIVE yet produced for all descriptions of Food and Drink, including Tinned Meats, Fruit, and Vegetables. It is largely used in the Colonies and on board some of the PRINCIPAL LINES of STEAMERS to KEEP MEAT, MILK, &c., FRESH DURING THE VOYAGE.

# GLACIALINE.

FIRMS IN THE COLONIES desirous of testing the MERITS of GLACIALINE can have a Sample Package forwarded GRATIS to their Agents in London for enclose, on receipt of business card with a reference. For further particulars, see page opposite.

W. F. GRIER & CO. (THE ANTITROPIC CO.), GLASGOW; & 20 STAMFORD ST., LONDON, S.E.



\*  
The  
Unfailing  
Food Preservative

**GLACIALINE.**

AWARDED  
GOLD MEDAL, NEW ZEALAND, 1882.  
GOLD MEDAL, ADELAIDE, 1881.  
Government Silver Medal,  
Norwich, 1881.

DIPLOMAS AND HIGHEST  
AWARDS  
WHEREVER  
EXHIBITED.

SEVEN YEARS' DAILY USE IN ALL PARTS OF THE WORLD

*Has completely Established the*

**HARMLESSNESS & EFFICIENCY**

*Of GLACIALINE as a Preservative of all kinds of Food and Drink.*

**EVERY CHEMIST SHOULD KEEP A STOCK OF GLACIALINE.**

*It is supplied in ELEGANT SIXPENNY SAMPLE BOXES; Trade Price 4/6 per doz.*

*In 2/- Packets, and Canisters 2/3; Trade Price 18/- and 19/6 per doz.*

Tramphlets, Handbills, and Showcards sent gratis on application to the  
SOLE MANUFACTURERS,

**W. F. GRIER & CO.**

(THE ANTITROPIC COMPANY),

Glasgow; and 20 Stamford Street, Blackfriars, London, S.E.



# HOGES HOREHOUND HONEY

The safest and most efficacious remedy ever discovered for all pulmonary diseases, sore or congested lungs, consumption, coughs, colds, sore throats, hoarseness, &c. An uncompounded product of Nature secreted in the petals of Horehound blossoms, and gathered by the honey bee.

London, March 30, 1883.

Gentlemen,—I have much pleasure in stating that I consider your Hoge's Horehound Honey the most wonderful remedy I have ever tried, possessing properties which are nothing short of marvellous, for the cure of affections of the throat and chest.

(Signed) MARIE RÔZE.

7 Suffolk Lane, London, E.C., April 20, 1883.

I never found any remedy to relieve the irritation of my throat until I tried your Hoge's Horehound Honey, which had a wonderful soothing effect and gave relief at once.

(Signed) G. F. BLACK.

16 Gloucester Road, Finsbury Park, April 28, 1883.

Your Hoge's Horehound Honey was very effectual in relieving and ultimately curing my daughter's cough.

(Signed) J. W. BAYLEY.

Mincing Lane, London, April 27.

Your Hoge's Horehound Honey was used with great success in my family.

(Signed) H. RUBECK.

Langham Hotel, April 28.

I find immediate relief of my throat and chest when troubled with an irritating and hacking cough by using your Hoge's Horehound Honey.

(Signed) J. C. MILLER.

47 Arlington Street, Islington.

I was troubled for a long time with a bad cough, which I found was becoming chronic. I used your Hoge's Horehound Honey, and gave it a fair trial. I am happy to be able to tell you that it quite relieved me, and I recommend it as a certain cure.

(Signed) G. M. SMYTH.

2 Moorgate Street, London, April 30.

I have your small bottle of Hoge's Horehound Honey, which I have tried, and find it excellent. I should be glad if you would send me a larger bottle to my house, The Poplars, Herne Hill.

(Signed) D. CHADWICK.

Put up only in Bottles to sell at 1s. 1½d. each. Price to Chemists 8s. 6d. per dozen. 1000 Handbills sent with each gross ordered.

To any Chemist who sells 12 gross within 12 months 1 gross will be given as a bonus.

Supplied by Messrs. Burgoyne, Burbidges, Cyriax & Francis; Messrs. Barclay & Sons; Maw, Son & Thompson; W. Edwards & Son; F. Newbery & Sons; Sanger & Co.; R. Hovenden & Sons; Alexander & Co., Dublin; or any Wholesale Druggist. Also of the Proprietors—

**WM. HOGES & CO., LECONFIELD ROAD, LONDON, N.**

OWNERS OF THE ONLY HOREHOUND APIARY.



# S. MAW, SON & THOMPSON'S Bath Gloves, Rubbers, &c.

	Gloves. (Pairs.)	Straps.	Pads.
<b>OLEFACIO OR BADEN, No. 1,</b> soft Brown . . . per doz.	6/4	10/8	6/0
<b>OLEFACIO OR BADEN, No. 2,</b> hard Brown . . . per doz.	6/4	10/8	6/0
<b>OLEFACIO OR BADEN, No. 3,</b> soft Brown striped. per doz.	6/8	11/4	6/0
<b>OLEFACIO (the U.S.), Striped</b> soft Brown . . . per doz.	6/8	11/4	6/0
<b>HONEYCOMB, White.</b> per doz.	5/4	10/8	5/6

	Gloves. (Pairs.)	Straps.	Pads.
<b>REVERSIBLE, No. 1, one side</b> soft Brown, the other best White Turkish . . . per doz.	7/0	12/0	6/0
<b>REVERSIBLE, No. 2, one side</b> hard Brown, the other White Honeycomb . . . per doz.	7/0	12/0	6/0
<b>REVERSIBLE, No. 3, one side</b> Egyptian Loofah, the other best White Turkish, per doz., single	8/0	—	—

**TURKISH THIN WHITE GLOVES**, per doz. pairs, 4/-      **PADS**, per doz. 4/-  
**Ditto BEST QUALITY**      ...      ...      "      5/-      "      "      5/8

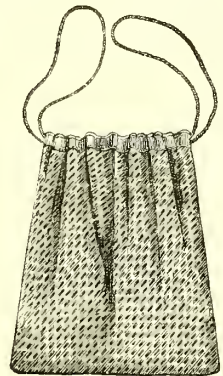
*SPECIAL QUOTATIONS TO WHOLESALE BUYERS.*

## S. MAW, SON & THOMPSON'S WATERPROOF CHECK SPONGE BAGS.

**BEST QUALITY.**

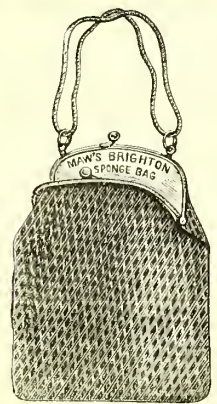
No. 1	2	3	4	5	6
7×6	8×7	9×8	10×9	11×10	12×11 inches.
6/0	7/0	9/0	11/0	12/6	16/0 per dozen.

For other descriptions, see Quarterly Price Current, page 99.



## S. MAW, SON & THOMPSON'S BRIGHTON SPONGE BAGS, WITH BALL CLASP FASTENINGS, NICKEL-PLATED.

No.	2	3	4	5	6
	8×7	9×8	10×9	11×10	12×11 inches.
<b>CHECK...</b>	...	16/0	18/0	20/0	26/0
<b>SAISLEY</b>	...	18/0	20/0	22/0	28/0 per dozen.
					32/0 "



THE BRIGHTON SPONGE BAG.

*SPECIAL QUOTATIONS TO WHOLESALE BUYERS.*

**S. MAW, SON & THOMPSON, LONDON.**

**Paton & Charles**

(ESTABLISHED 1785),

**Tunnel Soap Works,****LONDON, E.****Paton & Charles**

(ESTABLISHED 1785),

**Tunnel Soap Works,****LONDON, E.****A HIGH-CLASS PERFUMED HYGIENIC TOILET SOAP.***Strongly recommended by the Medical Profession for its beneficial effects on the Skin, and for Preventing the Transmission of Cutaneous Diseases.***DR. HASSALL'S REPORT ON THE HYGIENIC SOAP OF MESSRS. PATON & CHARLES.***"We have very carefully analysed samples of the Hygienic Soap manufactured by Messrs. PATON & CHARLES, and have also**"subjected them to certain practical tests with a view to determine their antiseptic action; we find, that when as little as**"one part of the soap is added to 10,000 parts of putrescible organic liquids an efficient antiseptic action is exercised,**"no decomposition ensuing for a period of several weeks. The agent used is a very energetic antiseptic. This soap**"is admirably adapted for general as well as for medical use, being very well made, non-irritating, and of an**"agreeable aromatic odour. It will not only disinfect the skin in cases of infectious diseases, but the suds**"will tend to purify any sewer or house-drain into which they are thrown. This soap is a valuable**"adjunct to the sanitary appliances of every household.**"ARTHUR H. HASSALL, M.D.**"OTTO HEHNER, P.C.S."**Makers of the celebrated "Hard Water Soap" (Regd.), Double Primrose (Regd.), Extra Mottled, and all kinds of Household and Toilet Soaps.*

To be obtained from the following Wholesale Chemists:—Messrs. Bais & Co., 4 Jewry Street, E.C.; Messrs. Barclay & Co., Farringdon Street, E.C.; Messrs. Butler & Crispe, 4 Cheapside, E.C.; Messrs. Davy Yates & Co., 61 Park Street, Southwark; Messrs. Edwards & Sons, 157 Queen Victoria Street, E.C.; Messrs. Evans, Lescher & Webb, 60 Bartholomew Close, E.C.; Messrs. Herrings & Co., 49 Aldersgate Street, E.C.; Messrs. Hodgkinson & Co., 144 Aldersgate Street, E.C.; Messrs. Hodgkins & Co., Preston & King, 88 Leadenhall Street; Messrs. Lynch & Co., Aldersgate Street, E.C.; Messrs. Maw & Co., Aldersgate Street, E.C.; Messrs. Newbery & Son, 1 King Edward Street, E.C.; Messrs. Sanger & Co., 252 Oxford Street, W.; Messrs. Sutton & Co., Bow Churchyard, E.C.; Thompson, Millard & Co., Lim, Great Eastern Street, E.C.

# F. A. SARG'S SON & CO.'S

## CHEMICALLY PURE GLYCERINES

AND

## TOILET GLYCERINE ARTICLES.

**Transparent Glycerine Soap,**

In registered Packets of three Tablets, and in oval Tablets in paper. Warranted to contain 33% of the purest Glycerine.

**Liquid Glycerine Soap,**

Best preventive against chapped hands, and unrivalled for imparting softness to them, and rendering them clean and white.

See Testimonials of Professor J. von Liebig, Baron; and of Professor F. Wöhler.

**Sarg's Double Distilled Glycerine, Chemically Pure,**n  $\frac{1}{2}$  lb. and 1 lb. Bottles, should have a place in every nursery on account of its salutary action on the heads of children, relieving them from dandruff, and the roughness of the scalp they are so commonly subject to.**Sarg's New Carbolic Glycerine Soap,**

In Boxes of three Tablets, is highly recommended as a most effective disinfection.

**GLYCERINE, CHEMICALLY PURE.****SARG'S DISTILLED CHEMICALLY PURE GLYCERINE**, 29° Beaumé, in Cases of Four 56-lb. Tins each.**SARG'S DOUBLE DISTILLED GLYCERINE**, Chem. pure, 30° Beaumé, in Cases of Four 56-lb. Tins each;Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100  $\frac{1}{2}$ -lb. Bottles, with Registered Label.**SOLD BY ALL WHOLESALE CHEMISTS AND DRUGGISTS.**

SOLE WHOLESALE AGENTS FOR THE UNITED KINGDOM AND THE COLONIES,

**SCHMEDES, ERBSLOH & CO.,**36 & 37 Monkwell Street, LONDON, E.C.; 14 Market Buildings, Flinders Lane, MELBOURNE;  
34 Pitt Street, SYDNEY.

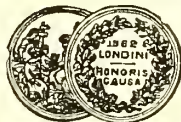


Medal, Paris Exhibition, 1867.

Medal, London Exhibition, 1862.



ESTABLISHED 1796.



# WILKINSON, HEYWOOD & CLARK,

*Varnish, Japan and Colour Works,*

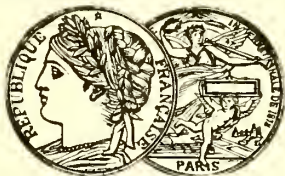
## 7 CALEDONIAN RD., LONDON, N.

### Manufactory—WEST DRAYTON, MIDDLESEX.

DEPOTS IN ALL THE PRINCIPAL TOWNS OF EUROPE.

Paris—87 Avenue du Roule, Neuilly.      Liverpool—30 Seel Street.

Gold Medal for Varnish and



Colours, Paris Exhibition, 1878.

**Varnishes.**—Varnishes of all descriptions for Railway Carriage Builders, Coach Builders, Decorators, Ship Builders, Agricultural Implement Makers, Paper Stainers, Floor Cloth Manufacturers, &c., &c. These Varnishes are all of acknowledged superiority, and will stand the severest tests.

**Non-Blooming Varnishes** for interior decoration, *guaranteed not to bloom.*

**Colours, Dry, Ground and in Pulp, of all kinds.**—These Colours have for many years past been supplied to all the leading Coach Builders, House Painters, Paper Stainers, and Agricultural Implement Makers in the United Kingdom and abroad. They are all of the very finest quality; and for brilliancy, softness, and body are unsurpassed.

**Non-Poisonous Colours.**—A complete series of original Colours, all guaranteed to be non-poisonous. From these Colours an infinite variety of delicate tints can be obtained. Primarily intended for distemper, they can be also used in oil and supplied in pulp.

**Colours in Collapsible Tubes.**—The advantages of these Tubes are well known. The packages are exceedingly portable; and the exact quantity required can be easily taken out and the remainder kept in perfect condition for any length of time. Guaranteed absolutely pure; and for brilliancy of colour, strength of staining power, and softness, they are unsurpassed.

**Paints Ready for Use, in 1, 2, 3, 4, and 7 lb. Tins.**—These Paints are intended for domestic use. The Colours are very brilliant, durable, and dry well, and with a good surface.

The demand for these Mixed Paints is rapidly increasing, and large quantities are supplied to all parts of the country and to the Colonies. Tint cards sent on application.

**Brushes.**—Varnish and Paint Brushes of every description always in stock.

All Brushes manufactured by WILKINSON, HEYWOOD & CLARK bear the initials of the firm, have for years past been in great demand, and give the greatest satisfaction. Illustrated Price Lists sent on application.

**Oils.**—Raw and Boiled Linseed, Colza, Olive, Lubricating, and other Oils for home and export trades.

WILKINSON, HEYWOOD & CLARK have long enjoyed a great reputation amongst all the leading Coach Builders and Decorators, House Painters, Ship Builders; and for years past they have supplied their goods to the Admiralty, to the War Office, to the India Office, to the Colonial Office, to the Board of Trade, and to the largest Shipping Houses and Railway Companies.

A FEW OF  
**S. MAW, SON & THOMPSON'S**  
**SPECIALTIES**

Well worth the attention of the Trade.

*SPECIAL QUOTATIONS TO WHOLESALE BUYERS.*

MAW'S AROMATIC TOOTH PASTE	...	...	Per dozen, 12/.
MAW'S CHERRY TOOTH PASTE	...	...	Per dozen, 4/ and 7/6.
MAW'S CACHOUS AROMATISES	...	...	Per dozen, 2/6.
MAW'S INDELIBLE MARKING INK	...	...	Per dozen, 3/ and 6/.
MAW'S SAUCE PIQUANTE	...	...	Per dozen, 9/ and 15/.
MAW'S VIOLET POWDER	...	...	See Price Current, page 124.
MAW'S ADHESIVE PLASTER	...	...	See Price Current, page 88.
MAW'S ATMOSPHERIC ODORATORS	...	...	See Price Current, page 53.
MAW'S BREAST RELIEVERS	...	...	See Price Current, page 61.
MAW'S CHEST PROTECTORS	...	...	See Price Current, page 65.
MAW'S COURT PLASTER	...	...	See Price Current, page 117.
MAW'S CORN PLASTERS	...	...	See Price Current, page 117.
MAW'S ELASTIC STOCKINGS, &c.]	...	...	See Price Current, page 35.
MAW'S ENEMA APPARATUS	...	...	See Price Current, pages 39 to 41.
MAW'S PATENT FEEDING BOTTLES	...	...	See Price Current, pages 69, 70.
MAW'S FLESH GLOVES AND RUBBERS	...	...	See Price Current, page 72.
MAW'S INCORRODIBLE RESPIRATORS	...	...	See Price Current, page 47.
MAW'S INHALERS	...	...	See Price Current, page 76.
MAW'S LINT (TAYLOR'S PATENT)	...	...	See Price Current, page 79.
MAW'S PERFUMERY, &c.	...	...	See Price Current, pages 117, 118.
MAW'S SMELLING BOTTLES	...	...	See Price Current, pages 95, 96.

**S. MAW, SON & THOMPSON, ALDERSGATE STREET, LONDON.**





THE ONLY PALATABLE APERIENT  
NATURAL MINERAL WATER.

TO EVERY CHEMIST,

Sir,—The large and increasing demand for Æsculap, while proof of its superiority and the favour in which it is held by the Medical Profession, in the estimation of the Proprietors, largely due to the support which has been everywhere accorded to it by the Chemists.  
In recognition of this encouragement, my Directors have determined to cultivate your custom to the utmost of their ability, and to confine the sale of the Water as much as possible to the proper trade channels—namely, the Chemists.  
I am instructed, therefore, to inform you that permission having been obtained to print and circulate a PAMPHLET on “The Nature and Uses of Æsculap,” copies of the same, together with 1,000 CIRCULARS (a good, large, useful counter bill) with your name printed at foot, will be supplied to you on application, free of charge, together with TRANSPARENCIES and SHOW CARDS, and forwarded to you direct through any Wholesale House, for enclosure.  
At foot I subjoin prices at which Æsculap can be obtained direct, or from any of the Wholesale Druggists and Dealers.

Awaiting the favour of your reply, I remain, your obedient Servant, E. SAMSON, Manager.

N.B.—I shall be glad to receive any suggestions from you with a view to promoting the sale of Æsculap in your neighbourhood to our mutual advantage.

ENTS, Retail, 1/6; for Cases of 50 Bottles, 50/- net. QUARTS, Retail, 2/-; for Cases of 25 Bottles, 30/- net.  
On lots of Ten Cases carriage will be paid, and a discount of 10 per cent. allowed.

ÆSCULAP is now prescribed by all the leading Medical Men, in preference to all other Waters.  
ÆSCULAP will continue to be largely advertised all over the world.  
ÆSCULAP is acknowledged by everybody to be the best Natural Aperient Water.

Every Bottle direct from the Celebrated Spring in Hungary. Retail Price, 1/6 and 2/- each.

THE ÆSCULAP BITTER WATER CO., LIMITED, 38 SNOW HILL, HOLBORN VIADUCT, LONDON, E.C.

SINAPISMES PARISIENS.

Medals at Universal Exposition, Paris, 1878; Melun, 1880; Bordeaux, 1882.

Manufactured by M. POURRET,

PHARMACIEN OF THE HIGHEST CLASS OF THE ECOLE DE PHARMACIE DE PARIS.



STEAM MANUFACTORY  
AT PARIS.

Specially Prepared with the Names and  
Addresses of Pharmacists.

Each 1,000 leaves of the Sinapismes ordered will be accompanied by a very handsome chromo-lithograph, bearing the name of the retail pharmacist only, with an announcement to the public enumerating the advantages of the Sinapism.

When desired by buyers we reproduce without extra charge all trade marks, medals, coats of arms, &c. We also undertake to print on the back of each Sinapism the name of the retailer, with an advertisement of his specialities or other products, and to enclose a circular in each box of ten leaves.

We commend to the attention of pharmacists these Sinapismes bearing their own names, and we guarantee to supply an article of the highest quality.

Besides supplying the public with an excellent Sinapism the pharmacist secures the double advantage of advertising his name and address, as well his special products, without extra charge.

The Sinapismes are put up as required in packets of 10, 25, or 100 leaves, in very handsome varnished tin boxes, ornamented with vignettes, and bearing the directions for use.

If 5,000 boxes are ordered we undertake to place the name of the buyer on each box. All packages are free, and orders exceeding £6 are sent carriage free.

WE PRINT IN EVERY LANGUAGE.  
PRICE CURRENT.

SINAPISMES PARISIENS WITHOUT THE NAME.

Boxes of 10 leaves .. .. .	0f. 70c., about 0s. 7d.
“ 25 “ .. .. .	1f. 35c. “ 1s. 1½d.
“ 100 “ .. .. .	5f. 00c. “ 4s. 0d.

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2	FINE	100	14	9	7	5	3	13
3	SECOND	100	11	16	5	19	3	0
4	THIRD	100	9	4	4	13	2	7
5	ROUGH, FOR STABLE USE...	100	6	12	3	7	1	14
6	" Smaller	100	3	10	1	16	...	...
7	SELECTED QUALITY	26	8	18	4	10	...	...
8	GOOD	26	5	16	2	19	...	...
9	SELECTED	18	8	8	4	5	...	...
10	GOOD	18	5	12	2	17	...	...
11	FIRST	200	4	8	2	5	...	...
12	SECOND	200	2	5	1	3	...	...
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14	SECOND	40	13	14	6	18	...	...
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16	SECOND	100	23	14	11	17	5	19
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19	SECOND	200	13	18	7	0	3	10
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21	SECOND	200	18	10	9	6	4	14
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034c.	„ Toilet Cups	...	...	...	„ 2/0 to 4/6
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Honeycomb	...	...	...	by the lb.,	from 5/0 to 14/0
Turkey Cups	...	...	...	„	„ 31/6 to 60/0
Turkey Nursery Cups	...	...	...	„	„ 19/0 to 30/0
Turkey Toilet Cups	...	...	...	„	„ 30/0 to 60/0
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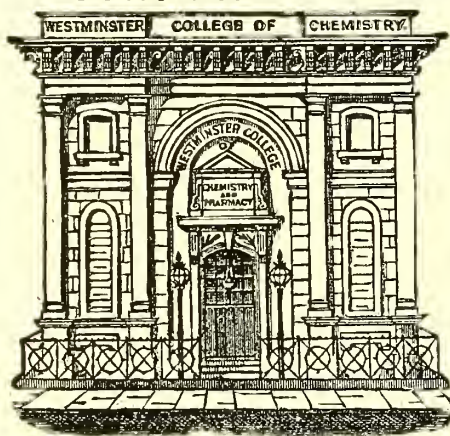
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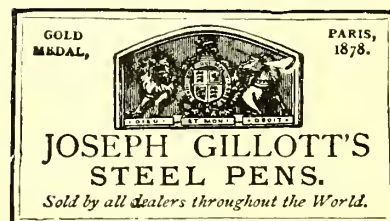
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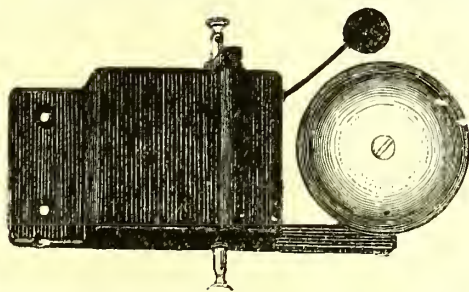
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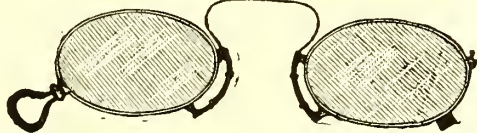
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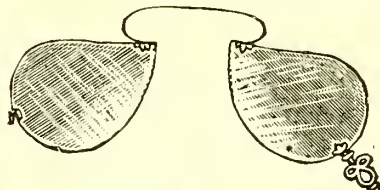
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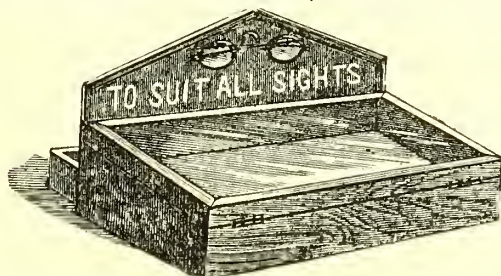
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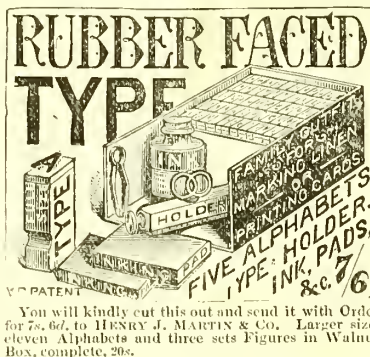
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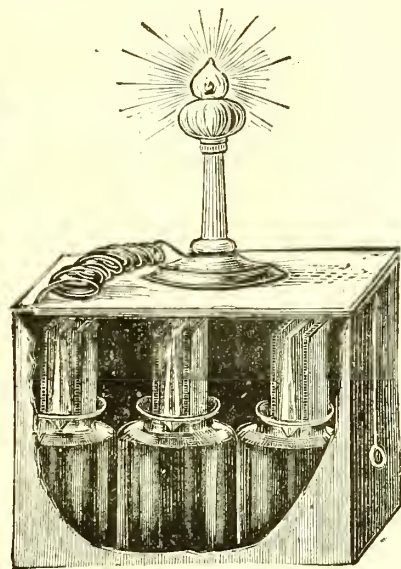
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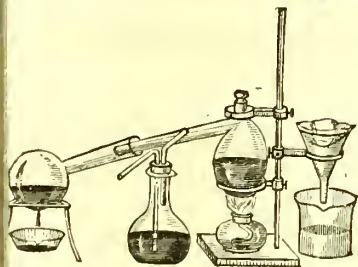
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PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867; VIENNA, 1873.

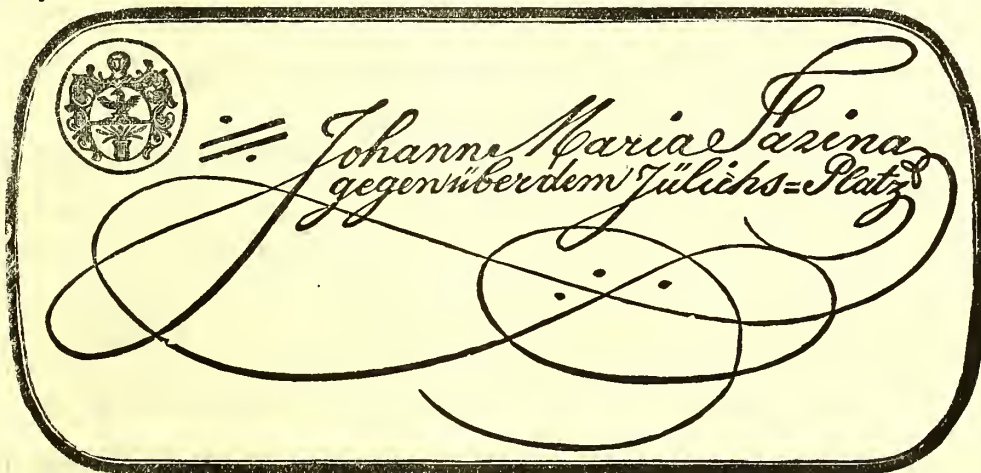
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.R.H. Frederick William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. ½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

### MESSRS. J. & R. McCRACKEN,

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The following are the sizes of my bottles:—

No. 1. Long Green Flasks	...	...	...	...	...	...	12 bottles	} to one dozen.
" 2. Short White Bottles	...	...	...	...	...	...	12 "	
" 3. Double ditto	...	...	...	...	...	...	6 "	
" 4. Wickered Bottles (small)	...	...	...	...	...	...	8 "	
" 5. ditto (medium)	...	...	...	...	...	...	4 "	
" 6. ditto (large)	...	...	...	...	...	...	2 "	

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(BY MEDICAL CELEBRITIES RECOMMENDED)  
is confirmed by experience of half a century.

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**RIMMEL'S AROMATIC OZONIZER**, a fragrant powder which, simply spread on a plate in apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of *Ozone*, the great air purifier. Its clean and portable nature renders it far preferable to liquid disinfectants. It is in use in the principal Hotel's, Clubs, and Theatres, and also in the Saloons and Cabins of several Lines of Steamships. In 4-oz. Tins, 1s.; 1-lb. Tins, 3s. 6d.; Spreading Plate, 6d.

**RIMMEL'S OZONIZED EAU DE COLOGNE, LAVENDER WATER, or FLORIDA WATER**, sprinkled on a pad hung up in the air, destroys bad smells and noxious effluvia in sick rooms, closets, &c. It is recommended also to be used on the handkerchief when attending crowded places, visiting the sick, or travelling by land or sea. Price, 2s. 6d. and 5s. per Bottle; Pad, 1s.

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ROSEMARY, ROSE GERANIUM, NEROLI, SPIKE, &c.

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5 oz., 10 oz., 20 oz. fluid.

N.B.—Patent concentrated unchangeable Essences: Rose, Orange, Jasmine, Tuberoses, Cassie, Violet, Jonquil. We do not use Ether or Sulphur of Carbon.

MEDICATED  
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Approved by the  
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SOLD BY ALL  
Chemists, Stationers,  
Perfumers,  
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Italian Warehousemen.

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HOUSEHOLD PAPER

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LAVATORY AND TOILET USE.  
PRICE ONE SHILLING PER PACKET.

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Of every known  
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## Wholesale Perfumers & Fancy Soap Makers.

**TOILET SOAPS**  
Of every description.

Concentrated (various)		POMADES, &c.		Special Soaps in Boxes.		Medicated Soaps (IN WRAPPERS).		SOAPS (in Bulk).	
CHOICE ESSENCES									
(IN BULK).									
No. 30, 12/ for 20 fluid ounces.	doz.	Assorted (tall or squat) 4/ and 8/	doz.	Cold Cream Soap, 3 tablets in box 18/ and 20/	doz.	Carpet & Cloth Soap 3/6 and 7/ dz.	Almond .....	doz.	119/
No. 24, 9/6 "	doz.	Nursery (large) .....	doz.	Coal Tar Soap, ditto. 8/ and 12/	doz.	Dog Soap .....	Brown and White Windsor .....	doz.	
No. 18, 8/ "	doz.	Lime Juice & Glycerine 4/ and 8/	doz.	Carbolic, do. 8/ and 12/	doz.	Do Soap (Family) 3/6 and 7/ gr.	Curd .....	doz.	
	doz.	Glycerine and Lime Cream .....	doz.	Glycerine & Oatmeal do. 8/ and 12/	doz.	Carbolic .....	Egg White Soap .....	doz.	
	doz.	Brilliantine .....	doz.	" Transparent, do. 8/ and 12/	doz.	Camphr'd Winter 27/ and 39/	Glycerine .....	doz.	
	doz.	Brilliantine (Sweet) .....	doz.	" Carbolic, do. 8/ and 12/	doz.	Fullers' Earth .....	" and Almond .....	doz.	
	doz.	Brilliantine (White Rose), (separable) .....	doz.	Baby Soap, 4 tablets in box 9/ and 12/ ditto	doz.	Pumice Stone .....	Honey .....	doz.	
	doz.	Stopped Bottles .....	doz.	Family Economic, 4 ditto 8/ and 12/	doz.	Juniper Tar .....	Oatmeal .....	doz.	
	doz.	Cherry Tooth Paste .....	doz.	Thymol, 3 tabs. in box 8/ and 12/	doz.	Zinc .....	Marshmallow .....	doz.	
	doz.	Lime Salve, pots & sticks 4/ and 8/	doz.		doz.		Rose .....	doz.	
	doz.		doz.		doz.		Transparent Glycerine .....	doz.	

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Manufacturer: G. H. ORTH, Barmen.

G. 1,260, Double Distilled, Perfectly Colourless and Odourless, will stand every chemical test. Lower S. G.'s and inferior qualities also supplied.

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For Promoting the Growth of the Hair, Whiskers, Beard, Mustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

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its strength, 1, 1/2, 3, and 5, 0; **WHOLESALE**, 3, 10, and 30, per doz.  
his much-admired Perfume (prepared by the Widow of the late  
Joseph Okell), may be obtained from the leading Patent Medicine  
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Applications for **WHOLESALE** Agencies to be made to the **Sole**  
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One application is guaranteed to destroy all Nits and Parasites in Children's Heads, and immediately allay the Itching and Irritation.

It is now used in Thousands of Families with the greatest success, and all who have tried it are delighted with the effect, and declare it to be worth A GUINEA A BOTTLE.

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Sold in large Bottles, price ONE  
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5/6 size, 36/ per doz. 10/6 size, 72/ per doz.

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For use in Breweries in the place of Hops themselves; imparts a finer taste, and is much cheaper.

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Jockey Club	1/6	"	12/	Jockey Club Bouquet...	12/	12/	& 18/
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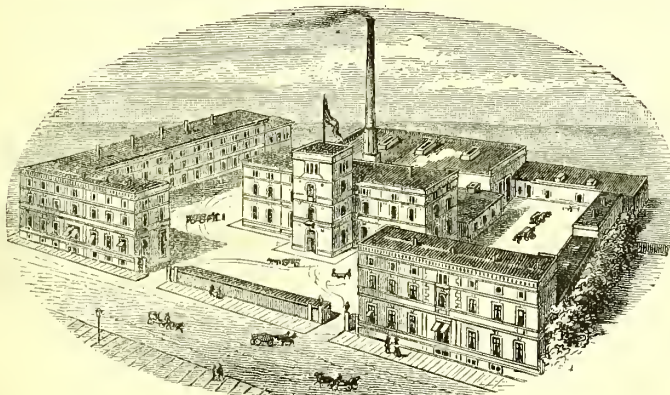
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This preparation has the  
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applications the Corn—  
which will be destroyed—  
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It is put up in cases  
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SOLUBLE ESSENCES FOR AËRATED WATER,

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Extra Super Lemon, which is double the strength of ordinary commercial qualities.

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PROTECTED BY ROYAL LETTERS PATENT.

*For producing a head of Creamy Richness upon all kinds of Syrups, Aerated Waters, Beers, Ales, Cider, Champagne, &c., 2s. 6d. per pound.*

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10 PER CENT. DISCOUNT FOR CASH.

<p><b>Absorbent Cotton Wool.</b> Per lb. 2/6.</p> <p><b>Areca Nut Tooth Paste.</b> 12 Sixpenny size, in Counter Box, per dozen, 4/; 6 One Shilling size, 8/.</p> <p><b>Bathing Caps</b> (Circular Shape). Drab Waterproof Cloth, 9/; Check ditto, 12/; Oiled Silk ditto, 16/ per dozen.</p> <p><b>Beetle Powder.</b> In Tin Dredgers, to retail at 3d. and 6d. each. One or three dozen in Counter Box, 2/ 4/ per dozen.</p> <p><b>Benzine</b> (Perfumed). Removes grease spots, takes away thumb marks from books, &amp;c., makes old kid gloves equal to new, cleans artists' brushes, destroys vermin in domestic animals, &amp;c., 4/ and 8/ per dozen.</p> <p><b>Cachou Lozenges.</b> A 2 oz. Vitrified Tin Box filled with Cachous, 4/ per dozen; to retail at 6d. or 1/.</p> <p><b>Camel Hair Pencils.</b> 1 gross assorted in a show case containing Duck, Goose, and extra Goose, 4/6; ditto, on sticks, 7/ per gross.</p> <p><b>Cherry Tooth Paste.</b> 12 Sixpenny size, in Counter Box, 4/; 6 One Shilling size, 8/ per dozen.</p> <p><b>Eye Shades</b> (Reading). Self-adjusting and ventilating. Very light, 6/ per dozen; to sell at 1/.</p> <p><b>Feeding Bottles.</b> 22 patterns. Send for a detailed price list.</p> <p><b>Floating Light</b> (Tin). With Reflecting Float. In boxes containing 60 lights, 4/; 120 lights, 8/ per dozen. Only needs an introduction to create a demand.</p> <p><b>Fly Paper.</b> 1/9 per 100; 16/ per 1,000. In Sixpenny Books, 3/6 per dozen.</p> <p><b>Folding Boxes.</b> On the American principle, for Dispensing or for Proprietary Goods, 2 oz., 4/6; 3 oz., 5/; 4 oz., 5/; 6 oz., 5/6; 8 oz., 6/; 10 oz., 6/6; 12 oz., 7/; 16 oz., 7/6; 20 oz., 8/ per gross.</p> <p><b>Glass Pots.</b> Opaque, for Vaseline. Cold Cream, &amp;c. Oval, 1/2 oz., 1/5; 1/6; 1/4; 1/2; 3/4; 1 oz., 1/10; 1 1/2 oz., 2/; 2 oz., 2/3; 3 oz., 2/9; 4 oz., 3/6 per doz. Opaque blue, 2d. per doz. extra.</p>	<p><b>Inexhaustible Salts.</b> A Watch Shape Bottle, filled with strong Ammonia, each in a box, 7/ 10/ per dozen.</p> <p><b>Inhaler</b> (New Pattern). The Universal (Earthenware), to hold Hot Water, with burnt-in directions for use, with glass tubes, 18/ per dozen.</p> <p><b>Insect Powders.</b> Insect Powder, 2/ per lb. Ditto, in Bottles, 2/ 4/ 8/ per doz. Ditto, with Peppor Castor top, 4/ per doz. Ditto, in Tin Apparatus, with piston blower, 8/ per doz.</p> <table><tr><th colspan="3">Insect Powder Boxes.</th></tr><tr><td>One Penny size</td><td>..</td><td>per gross 2/</td></tr><tr><td>Threepenny " "</td><td>..</td><td>3/6 .. 5/</td></tr><tr><td>Sixpenny " "</td><td>..</td><td>" 5/ .. 8/</td></tr><tr><td>Shilling</td><td>..</td><td>" 8/ .. 10/</td></tr></table> <p>With Rotary tops, per gross, 6d. size, 9/; 1/ size, 12/.</p> <p>Belows, with piston blower, 5/6 per dozen.</p> <p><b>Medicated Japanese "Curl" Paper.</b> (As Soft as Silk). 500 Sheets in a packet, 4/ per dozen.</p> <p><b>Paper.</b> Demy size, specially prepared for Druggists' use. White, 8/6; Fast Blue, 10/6 per ream.</p> <p><b>Parchment Paper.</b> Very thin. Superior to Wax Papers for Wrapping Greasy Articles, or for Cold Cream Pots; and a quarter of the price, 1/ per quire. Cut to size for 1 lb., 2 lb., 4 lb. pots. Per dozen packets of 3 dozen, 4/ 6/ 8/.</p> <p><b>Perfume or Spirit Flasks.</b> Nickel plated top. Cut Glass, 10/6 per dozen.</p> <p><b>Pill Coater.</b> "Simple." (SYMES'). For coating small quantities of Pills with ease and perfection, 4/6 each.</p> <p><b>Saline Bottles</b> (with Plug Stoppers). Lamplough's size, 18/; Eno's, 18/ per gross. Handsome Wrappers for ditto, 7/6; Labels, 1/6 per 100.</p> <p><b>Seat Cushions</b> (Waterproof). A sine qua non for travellers. Folds up in a small compass for the pocket, 13/ 21/ per dozen.</p> <p><b>"Sparadrap Agglutinatif"</b> (French Sticking Plaster). Always soft and pliable. Does not irritate the skin. Will adhere to a fresh wound. Contains no resin or turpentine. Does not discolour. 10d. per yard.</p>	Insect Powder Boxes.			One Penny size	..	per gross 2/	Threepenny " "	..	3/6 .. 5/	Sixpenny " "	..	" 5/ .. 8/	Shilling	..	" 8/ .. 10/	<p><b>Sponge Bags</b> (Check Waterproof). Nos. 1, 2, 3, 4, 5, 6, 7, 8</p> <p>6/6 8/ 9/6 11/6 13/ 15/ 18/ 20/ per dozen.</p> <p>Ditto, with pocket, per dozen, 21/.</p> <p>Brighton shape, with nickel fastenings, per doz., 18/ 21/ 34/.</p> <p><b>Sponges</b> (Honeycomb or Turkey). A Revolution in the Sponge Trade. 12 on a card, per dozen, to sell at 1d., 8d., 2d., 1/4; 3d., 2/; 4d., 2/8; 5d. on a card, per dozen, to sell at 6d., 4/; 1/ 8/; 1/6, 12/; 2/6, 16/; 3/6, 28/; 4/6, 32/; 5/6, 40/; 6/6, 48/; 7/6, 54/; 8/6, 64/; 10/6, 80/.</p> <p><b>Stopper Loosener.</b> Boxwood, to fit any size Stopper, from a smelling bottle to a quart size, 1/ each.</p> <p><b>Teething Pads</b> (Agate). Real Stone, on card of 6, 9/ per dozen.</p> <p><b>Teething Pad</b> (Musical). 1 dozen on a show card, 4/ per dozen.</p> <p><b>"The Three Graces."</b> (Faith, Hope, and Charity). A New One Shilling Perfume, neatly put up in boxes, containing one of each to form a set, with Patent Sprinkler, 8/; Two Shilling size, 15/ per dozen.</p> <p><b>Tooth Paste.</b> Cherry, 4/ 8/; Areca, 4/ 8/ per dozen.</p> <p><b>Tube Brush.</b> New Pattern. The Brush is in the centre of the wire, 4/6 per gross.</p> <p><b>Tube Cleaner.</b> Patent Wire. Marshall's Patent. All metal. To retail at 1d., 9/ per gross.</p> <p><b>Vaccination Shield</b> (COWAN'S). The original. For protecting the child's arm after Vaccination. Reduced prices, 3/3, 6/6, 13/ per dozen; sell at 6d., 1/ 2/.</p> <p><b>Vagina Syringes.</b> Dr. Rowe's, with glass mounts, white balls, 18/; ditto, green balls, 21/; Dr. Rowe's, with elastic gum mounts, green balls, 21/ and 24/; ditto, white balls, 14/ per dozen.</p> <p><b>Vials.</b> Packed in wooden boxes containing 1 gross, for safety in transit and for convenience in storage. 1/2 oz., 4/; 1 oz., 5/; 1 1/2 oz., 6/; 2 oz., 7/.</p>
Insect Powder Boxes.																	
One Penny size	..	per gross 2/															
Threepenny " "	..	3/6 .. 5/															
Sixpenny " "	..	" 5/ .. 8/															
Shilling	..	" 8/ .. 10/															

WHOLESALE AND EXPORT DRUGGISTS' SUNDRIESMEN,  
**35 CASTLE STREET, HOLBORN, E.C.**  
 FULLY ILLUSTRATED PRICE LIST ON APPLICATION.





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White Rose,

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Opoponax,  
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Ylang Ylang,  
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*Supplied in Bond at greatly Reduced Prices.*

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**OPALINE FACE POWDER,** 3/6 and 7/ per dozen packets; 15/ per dozen Boxes.

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*Indents may be forwarded through any English Commission Merchant or Drug House, and will receive careful attention. Send for Price List.*

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*Our Preparation being duly Registered and Trade Marked under the Laws of Great Britain, and having been placed before the Public at great expense to us, we give notice that we shall fully protect our rights in every instance. Anyone making use of our Title, Labels, Bottles, or in any way attempting to trade on our reputation will be dealt with at once to the fullest extent of the law.*

**HOP BITTERS CO., London.**

## HOP BITTERS.

*We guarantee the sale of Hop Bitters, and authorise you to do the same by your Customers. If at any time you are dissatisfied with them, please return what you have unsold in good condition, and we will remit you the amount paid for same.*

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**MELBOURNE EXHIBITION, 1881, SILVER MEDAL.****G. B. KENT & SONS' BEST ENGLISH MANUFACTURE BRUSHES.**

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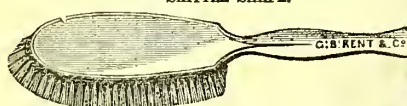
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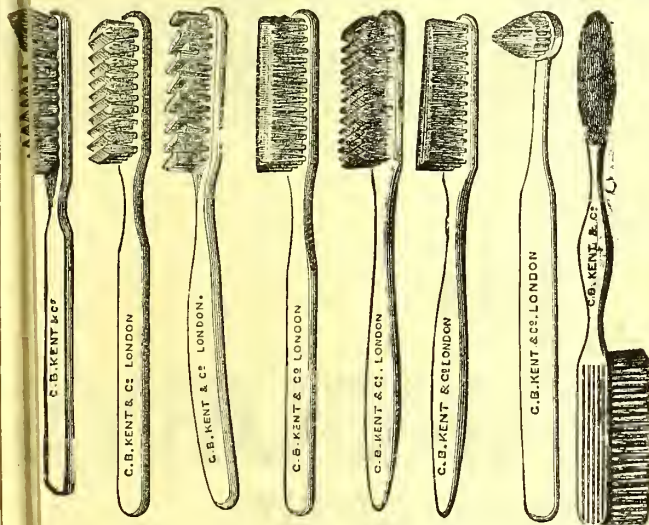
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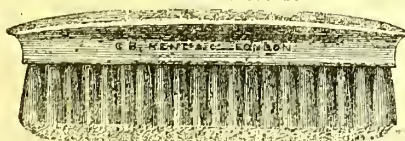
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First Quality	G.B. Kent & Co		LONDON	6/6
Second Quality	Imperial		Quality	5/0
Third Quality	WARRANTED		LONDON	4/0
Fourth Quality	WARRANTED		SECURE	3/6
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Badger Hair Tooth Brushes	..	..	4/6 6/0 8/0 11/0 per doz.	
Children's "	..	..	3/0 3/6 4/0 "	
Tooth Brush Guards	..	..	Metal, 3/3 Porcelain, 4/6 "	
Japanned Wet Brush Holders	..	..	3/0 5/6 6/0 13/0 "	

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CONCAVE



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OVAL PATTERN.



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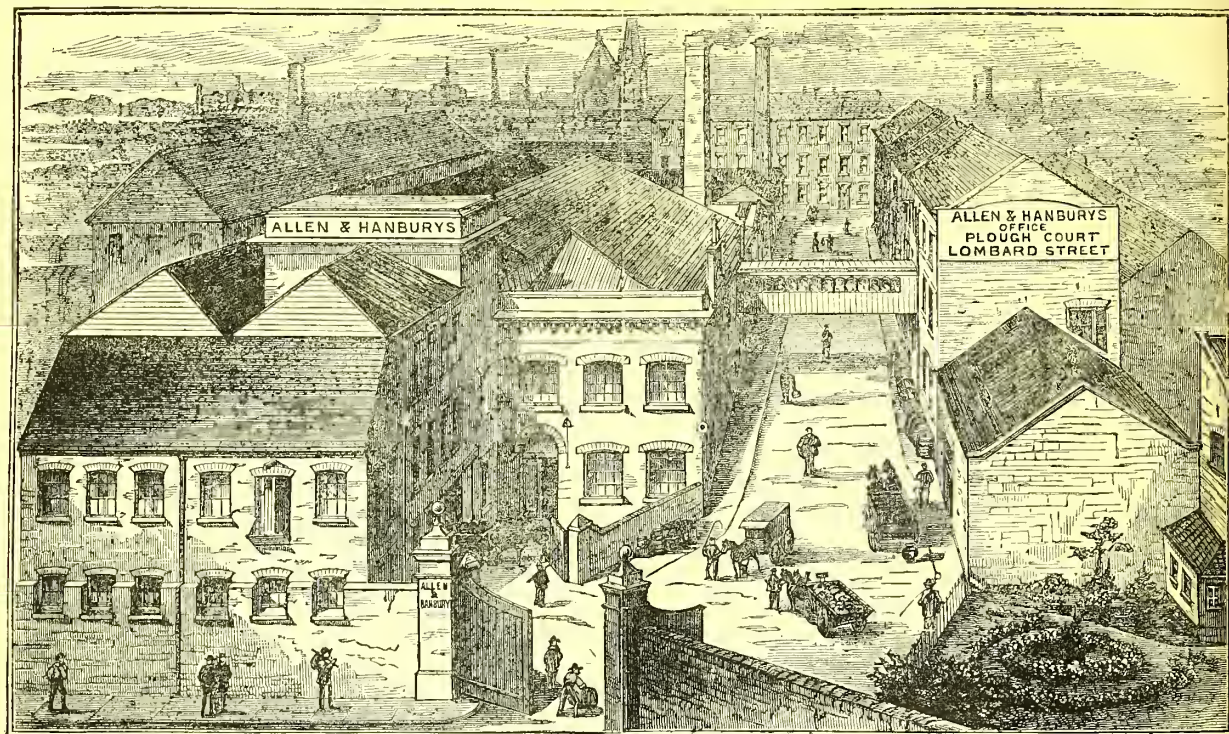
KENT'S CLOTH BRUSHES in WOOD or IVORY.  
KENT'S HAT BRUSHES in WOOD or IVORY.  
KENT'S FLESH BRUSHES, Handled or Webbed.  
KENT'S SHAVING BRUSHES in Badger Hair, &c., &c.

KENT'S FITTED LEATHER CASES of various descriptions.  
KENT'S HAND MIRRORS in Wood and Ivory.  
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KENT'S "NOVELTY" TOOTH BRUSH GUARD.  
(Telescope pattern, silver-plated.)

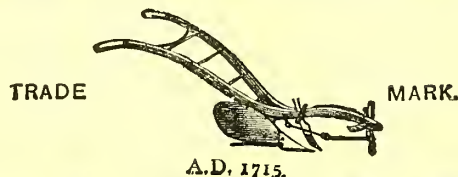
G.B. Kent & Sons' Revised Catalogue of Prices for 1883 is in the Press, and will be issued when ready. Copies will be forwarded on application.

**SPONGES.**—At 11 Great Marlborough Street is a Sponge Room worth the inspection of the Trade.





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## Acetic Acid

Dunn

## Acids

May (Benzoic, &amp;c.)

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Æsculap  
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Hooper  
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Kinmond  
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## Agencies Abroad

Alek (Auckland)  
Bathgate (Calcutta)  
Clarín (France and Continent)  
De Caycedo (U.S. Colmba)  
Evans, H. S. (Montreal)  
Faulding (A. Adelaide)  
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Dawson (Josephson's Oint)  
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Emery  
Evan (Styptic)  
Feunings (Powders)  
Hayman (Horehound)  
Heald (Whooping Cough)  
Hoge's Horehound Honey  
Holloway (Pills)  
Holt (Whooping Cough)  
Hop Bitters  
Lator (Phosphodyne)  
Lincoln (Clarke's Mixture)  
Maish (Liver pills)  
Newbery (Tooth paste, Bell's oil)  
Nicanoe (Rheumatism)  
Osborne (Drops)  
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Zimmermann

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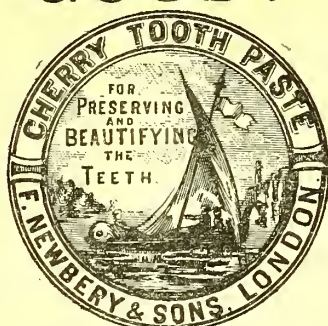
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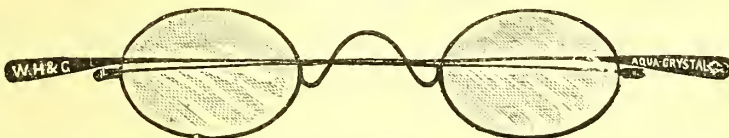
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DERBY, or near.—Wanted to Purchase, a light profitable Business, making a return of £600 or £700 a year. Address, P., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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IN A GOOD MARKET TOWN IN WILTS, an old-established Agricultural, Prescribing, and Dispensing Business; large house and garden; price £350. Address, 39/39, care of Publisher, THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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**WANTED,** an Assistant Dispenser, whose time is not fully occupied, to assist at the Hospital on Mondays, Wednesdays, and Saturdays, from 11 to 3 o'clock; salary, £30 per annum. Applications, with testimonials, to be forwarded before Tuesday, the 19th June, addressed to the Secretary.

6th June, 1883.

JOHN T. HUGO, Secretary.

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Sale to commence at eleven o'clock.

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PHILIP A. LATHAM, Secretary.

WILLIAM LEATHAM ANDREWS, Deceased.

**PURSUANT** to the 29th Section of the Act of Parliament of the 22nd & 23rd Vict., cap. 35, intitled, "An Act to further amend the Law of Property and to relieve Trustees," NOTICE IS HEREBY GIVEN that all Creditors and other persons having any claims or demands on or against the estate of **WILLIAM LEATHAM ANDREWS**, late of No. 2 Croxeted Road, WEST DULWICH, in the County of Surrey, Chemist, Druggist, and Dentist (who died at No. 2 Croxeted Road, afore-said, on the 24th day of April, 1883, and Letters of Administration of whose personal estate were duly granted to Charles Andrews, of Aldborough, Borough-ridge, in the County of York, by the Principal Registry of the Probate Division of the High Court of Justice, on the 30th day of May, 1883), are hereby required to send in the particulars of their debts, claims, or demands, to the said administrator, at the office of his solicitor, Mr. Frederick Culver James, of 9 Quality Court, Chancery Lane, in the County of Middlesex, on or before the 10th day of July, 1883; And Notice is hereby also Given, that at the expiration of the last-mentioned day the said administrator will proceed to distribute the assets of the said deceased among the parties entitled thereto, having regard only to the claims and demands of which the said administrator shall then have had notice, and that the said administrator will not be liable for the assets, or any part thereof, so distributed to any person of whose debt, claim, or demand he has not had such notice at the time of such distribution.

Dated this 8th day of June, 1883.

FREDERICK C. JAMES,

9 Quality Court, Chancery Lane, W.C.,  
Solicitor for the Administrator.

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N.B.—Note advertisement in Exchange Column.

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For Home, Foreign, and Colonial Markets.  
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Have the Largest Sale of any Medicine in the World.

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And sold at 1s. 1/2d., 2s. 9d., 4s. 6d., 11s., 22s., and 33s. each Box or Pot.

Chemists and Druggists selling "Holloway's Pills and Ointment" can, on application to the above address, or to the Wholesale House with whom they deal, be supplied free of charge with Handbills and Posters with their name and address printed at foot.

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Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 6 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.

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ARE THE BEST AND CHEAPEST.

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" " No. 1.....	6/6	1/3
" " No. 2.....	6/	1/
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Male Fern Oil .....	12/	3/
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Denoual's Injection (to ensure a radical cure in two days).....	18/	2/9

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THE PUREST IN ENGLAND.

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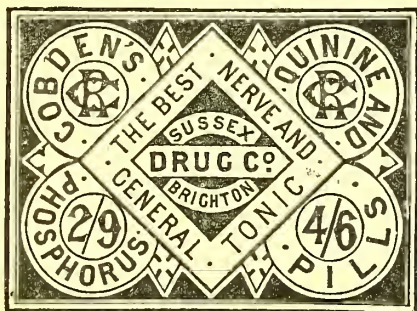
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# CORN AND BUNION PLASTERS.

INVENTED AND ESTABLISHED BY

## HENRY YOUNG,

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Thin, 12 in box (round 6d. boxes) ...	2/4 per doz. boxes.
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Thin, 1 gross in box ...	1/10 per gross.
Thick, 1 gross in glass-top box ...	3/0 "

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THE CERTAIN  
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It is unequalled for producing a dazzling purity of complexion, and giving it surpassing loveliness. It removes freckles, wrinkles, sunburn, spots, &c., improves the texture of the skin, rendering it exquisitely fine and soft, and showing the delicate blue tracings of the veins so much admired.

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TO HER MAJESTY'S ARMY CLOTHING DEPARTMENT.

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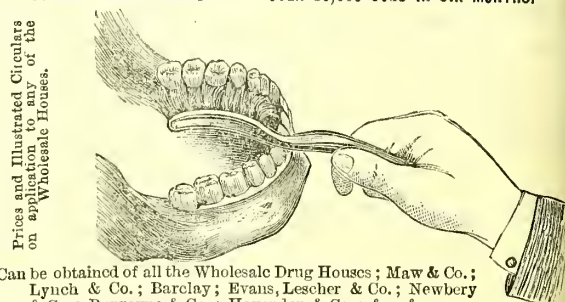
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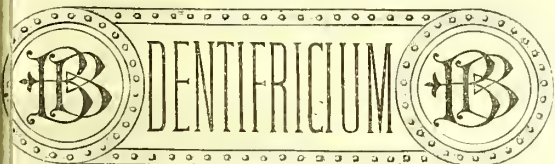
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SOLD BY ALL CHEMISTS

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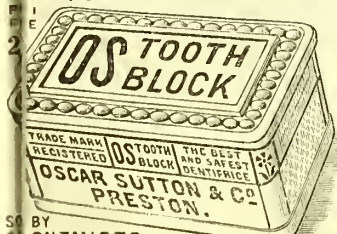
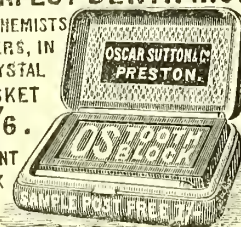
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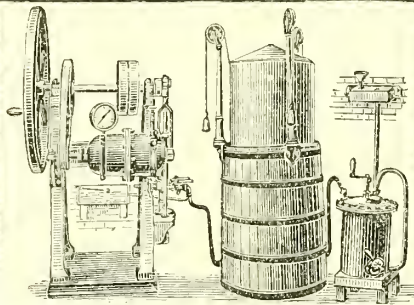
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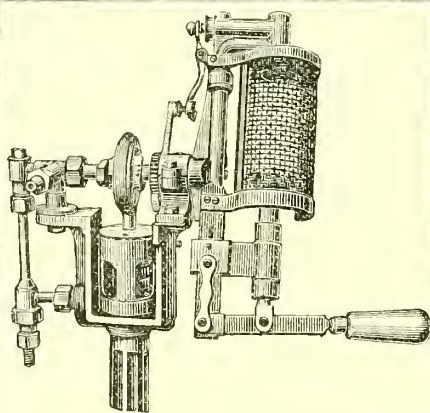
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		5/6 ROSE	12/6 & 14/6
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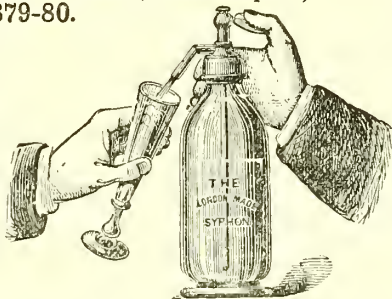
B. & F. are Sole Agents for CODD'S PATENT SODA WATER BOTTLE, in use in all parts of the world.

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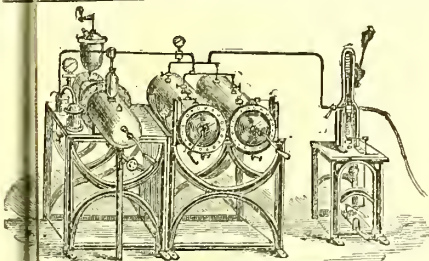
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## ESSENTIAL OILS

Of LEMON, BERGAMOT, SWEET AND BITTER ORANGE. Recently Awarded at the Exhibitions of

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## SODA WATER MACHINERY

84 & 85 WHITECROSS ST LONDON EC

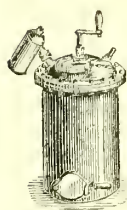
**J. TYLOR & SONS,**  
2 NEWGATE STREET, LONDON,

MANUFACTURERS OF

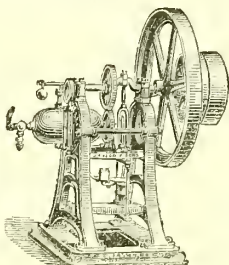
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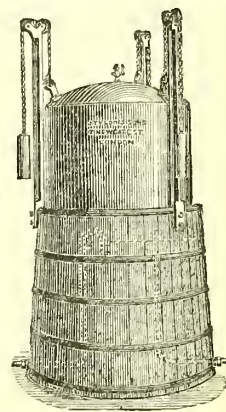
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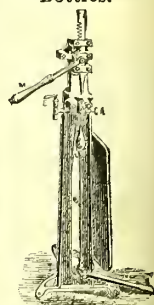
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LEMONADE,  
GINGER ALE, AND QUININE TONIC.**

*Prepared and Bottled specially for Export, and warranted to keep well.*

Manufactured with the utmost care and by improved machinery, these productions are recommended for purity and excellence of quality by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the **Lemonade and Ginger Ale** being procured from the **fresh Fruit and Finest Jamaica Ginger**, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The **Soda Water** is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of **Pure Carbonate of Soda**, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The **Seltzer, Potash, and Lithia Waters** are prepared with the utmost exactitude and the purest ingredients.

The **New Quinine Tonic** furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

**Ginger Ale (Aromatic)** of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

*N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.*

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

**JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street, MANCHESTER.**

SOLE WHOLESALE AGENTS FOR THE DOMINION OF CANADA: A. C. SMITH & CO., ST. JOHN, NEW BRUNSWICK.

A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

A CERTIFICATE OF MERIT awarded by the British Sanitary Institute of Great Britain, after a deferred PRACTICAL TRIAL AND EXAMINATION, July 4th, 1878.



# STEVENSON & HOWELL,

FELLOWS OF THE CHEMICAL SOCIETY, ETC.,

MANUFACTURING CHEMISTS, AND LICENSED COMPOUNDERS OF PURE

CONCENTRATED

## SOLUBLE ESSENCES

*ESSENCES FOR CORDIALS,*

## FRUIT ESSENCES, COLOURS,

AND ALL MATERIALS REQUIRED FOR THE PREPARATION OF

Pure Aerated Beverages, Liqueurs, Cordials and Syrups.

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DISTILLERS AND IMPORTERS OF

## ESSENTIAL OILS.

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ANALYTICAL & CONSULTING CHEMISTS TO THE TRADE.

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& 2 ADDLE HILL, CARTER LANE,  
LONDON, E.C.



# HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS, FOR THE PRODUCTION OF THE FINEST LEMONADE.

Added in the proportion of one fluid ounce to each gallon of syrup, the soluble essence imparts the most delicious flavour of the Lemon.  
—*The Chemist's Journal.*



The Essence mixes well with water, and has a delicate flavour. The Lemonade made therewith has a far more delicate flavour than that generally met with.—*The Chemist and Druggist.*

Trade Price, 8 6 per lb.; 12 lbs. and upwards, 8/.

PREPARED BY

**W. HAY, Manufacturing Chemist,**  
4 REGENT'S TERRACE, ANLABY ROAD,  
HULL.

# HAY'S GINGER CHAMPAGNE

CAN BE OBTAINED FROM THE SOLE AGENTS,

**INGRAM & ROYLE,**

119 QUEEN VICTORIA STREET, LONDON, E.C.,  
AND BATH BRIDGE, BRISTOL.

Retail Price, in Half Champagne Bottles, 5/6 per doz.

This SPARKLING, EXHILARATING, and REFRESHING DRINK, while being far more agreeable in bouquet and flavour than the FINEST CHAMPAGNE WINE, is, at the same time, unlike it, FREE from ALCOHOL. It is strongly recommended both for Juveniles and Adults, &c., as the most Wholesome Stimulating Beverage that has hitherto been introduced, and should be in every household during all seasons of the year.



Samaritan Free Hospital, Lower Seymour Street,  
Portman Square, London, W.

Dear Sir,—I have tried your Ginger Champagne, which I find to be excellent, and I look upon it as a step in the right direction towards meeting a long-felt want. Our Senior Physician, Dr. Henry Savage, has also tried it, and is much pleased with it. We ought long ago to have had such a beverage, and I believe that a great deal of drinking would thus have been prevented. I wish your effort most success.

I am, dear Sir, yours faithfully,  
GEORGE SCUDAMORE, Secretary.

An excellent and most agreeable beverage.—*The Lancet.*

Made by Mr. Hay, of Hull, with his well-known SOLUBLE ESSENCE OF JAMAICA GINGER, takes rank as a PURE, WHOLESOME, STIMULATING, and NON-ALCOHOLIC beverage.—*British Medical Journal.*

One of the most delicate and wholesome drinks in the market.—*Medical Press.*

SOLE MANUFACTURER—  
W. HAY, Chemist, &c., 4 Regent's Terrace, HULL.

MACHINERY & ALL APPLIANCES FOR THE MANUFACTURE OF

# SODA WATER.

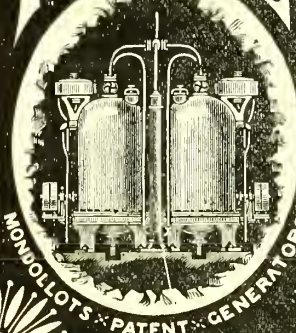
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OR SMALL FACTORIES.

GOLD MEDAL

# H. FAVARGER

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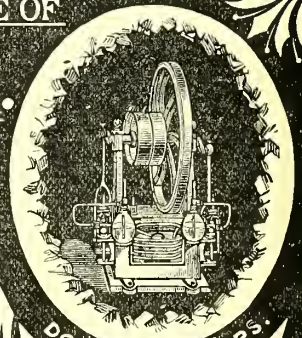
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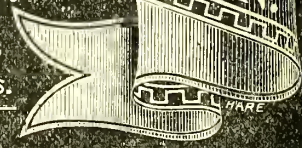
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75, TURNMILL ST., LONDON.

Gas & Steam Engines, Boilers & Shafting,  
Essences, Bottles, Boxes & all appliances.

CORRESPONDENCE INVITED, INSTRUCTION FREE.



PARIS, 1878.





# Hunyadi János

**CAUTION.**—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to WARN the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

## FOREIGN

### MINERAL WATERS.

FREDERICKSHALL (5 Cases, 6d. per Case less), 2s/- Case, 30 bot.; 3s/- Case, 60 ½-bts.

APOLLINARIS WATER, 2s/- Hpr., 50 bts. 3s/- Hor., 100 ½-bts.

"Carriage paid." Hampers free. 5 per cent. discount if 20 Hampers.

HUNYADI JÁNOS (10 Cases, 3/- and 5/- less), 3s/- Case, 25 bts.; 5s/- Case, 50 ½-bts.

BELTZER ... 11/- Hpr., 25 bts. 15/- Hpr., 50 ½-bts.

PULLNA ... 18/- Case, 20 bts. 30/- Case, 50 ½-bts.

VICHY ... 27/- " 50 ½-bts. 37/- " 50 ½-bts.

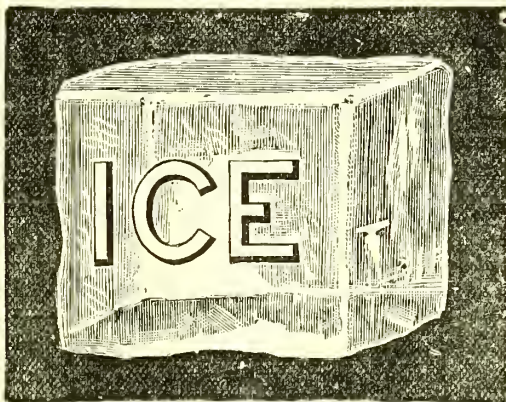
CARLSBAD ... 37/- " 50 bts. 42/6 " 50 "

KISSENGEN ... 27/6 " 50 " 40 " 50 "

ICHWALBACH ... 27/6 " 50 " 43/- " 50 "

WILDUNGEN ... 43/- " 50 " 43/- " 50 "

CARLSBAD SALTS, ½-Bot., 30/- per doz.; ¼-Bot., 40/- per doz.; Bot., 80/- per doz.



REGISTERED AT STATIONERS' HALL.

## NORWAY BLOCK ICE

FROM FINEST LAKES IN CHRISTIANIA.

Professor Frankland's report with analysis:—  
"The Ice is exceedingly pure, and contains less foreign matter than any water with which I am acquainted in this country."

Original Blocks  
(2 to 3 cwt. each) 2s. 0d. per cwt.  
1 cwt. to 2 cwt. ... 2s. 6d. per cwt.  
¼ cwt. to 1 cwt. ... 1d. per lb.  
Under 1 cwt. ... 1d. per lb.

Packing free. Utmost promptitude in despatch.

W. B. HARRISON,

Importer of Ice and Mineral Waters,

6 BRIDGE ST., SUNDERLAND.

## LAMPLOUGH'S EFFERVESCENT PYRETIC SALINE.

**HAVE IT IN YOUR HOUSES AND TRAVELS, USING NO OTHER SALINE:**  
It gives instant relief in Headaches, Sea or Bilious Sickness, and quickly cures the worst form of Eruptive or Skin Complaints. The various diseases arising from Constipation, the Liver, or Blood Impurities, Inoculation, the results of breathing air infected with Fevers, Measles, or Smallpox, are frequently prevented and certainly cured by its use.

The sale of these Saline Salts having greatly increased during the past few years, I beg most cordially to thank those who sell and recommend the same, and also to inform intending dealers that they will find Messrs. BARCLAY, EDWARDS, MAW, NEWBURY, SANGER, SUTTON, and the Wholesale Houses generally, ready to supply their wants. This Advertisement is found needful in consequence of the trouble, cost, and inconvenience in the keeping and collection of numerous small accounts. *Note.*—The Name, Trade Mark, Labels, Wrappers, &c., are all Registered and Entered at Stationers' Hall.

113 HOLBORN HILL, LONDON, E.C.

**SPECIAL NOTICE.**—Medical Gentlemen having fever cases, and desirous of trying the Saline, can have a single bottle at wholesale prices by sending their cards.

## VALLET'S PATENT IMPROVED STOPPERED BOTTLES,

Fig. 2. For Mineral Waters and Gaseous Liquids,  
Are now used by upwards of 900 Soda Water Manufacturers in the United Kingdom.

PRICES (Per Gross).—Patent Stopper, as per Fig. 1, 4/6; ditto, as per Fig. 3, 4/6; ditto, as per Fig. 4, 4/6; Patent Stoppered Bottles, ready for use; ditto Half Bottles; ditto Patent Unstoppered Bottles; ditto Half Bottles; Fig. 9 Boxwood Bottle Openers, polished, 8/6; ditto, fitted with rubbers, 10/6; Common Wood Bottle Openers, 5/6; ditto, fitted with rubbers, 7/6; Fig. 10, New Bottle Opener, 6/-.

**ROYALTY FREE.**

Fig. 1.



Fig. 3.



Fig. 1 Stoppers, when invoiced separately, are ready fitted with the rubber washer on, and are easily inserted into the bottle by the simple pressure of the thumb, the washer at the same time folding in the hollow part of the stopper when passing into the Bottle. It is the only Stopper which requires no tool to fit the Bottle with; and when a Bottle breaks, which seldom occurs, the Stopper is always fitted with this washer, ready to be inserted in a new Bottle. Therefore it is the most durable and inexpensive Stopper in the trade.

**ADVANTAGES.**—These Stoppers cannot break the Bottles. The smallest surface of indurubber ever exposed to the liquid of any Stopper out. The Stoppers are inserted without trouble. No extra cost for Bottles. The Stoppers are cheap, very durable, and particularly clean. The Filling Machine is not expensive, and quick in action. Any Filling Machine, however, will do. The Patentee guarantees the Stoppers perfect gasholders, therefore no leakage is possible. That Bottles may be opened, with or without an opener, by the pressure of the finger.

### NOTICE TO THE TRADE.

It having come to my knowledge that certain parties conversant with the great and acknowledged superiority of my Patent Stopper, have so re-modelled theirs as to constitute a clear case of infringement upon my rights, I wish it to be known that I intend to take such steps against the said parties as may seem desirable, should this notice not be effectual.

Sample and Particulars sent on application to

L. VALLET, 49 EVERTON RD., LIVERPOOL.

## PAINTS, OILS, GREASES, VARNISHES, &c.,

FOR CASH WITH ORDER.

White Lead, Ground, guaranteed absolutely genuine, 20/-; Coloured Paints, from 9/- per cwt.; Oak Varnish, from 4/6; Greases from 4/- per cwt.; Lubricating Oils, from 9d. per gall.; Linseed, Cotton, Rape, Colza, Olive, Lard, Fish, Bloomless Mineral, Vegetable, and all other Oils at exact market rates. Every description of Oil, Grease, Paint, Varnish, &c., supplied.

F. F. CHAMBERS & CO., KENSINGTON WORKS. HULL.

**BURGESS, WILLOWS & FRANCIS,**  
WHOLESALE & EXPORT DRUGGISTS,  
AND  
MANUFACTURING PHARMACEUTICAL CHEMISTS,  
101 HIGH HOLBORN, LONDON.

Price Lists sent on application. Special quotations given for Shipping Orders.





**HONOURABLE MENTION,**

International Food Exhibition, Agricultural Hall, London, October, 1880.

# HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(Guaranteed Pure and Free from Capsicum).

Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.

Highly adapted for the manufacture of *Transparent Aërated Waters*, and for all *Dietetic, Medicinal, and Pharmaceutical* purposes.

**Medical Opinions on**

**HAY'S Soluble Essence of Ginger.**

"Singularly free from resin."—*The Lancet*.

"It should entirely supersede the official preparation of the British Pharmacopœia."—*Medical Press*.

**Medical Opinions on**

**HAY'S Ginger Champagne.**

"An excellent and most agreeable beverage."—*The Lancet*.

"Made by Mr. HAY, of Hull, with his well-known Soluble Essence of Jamaica Ginger, takes rank as a pure, wholesome, stimulating, and non-alcoholic beverage."—*British Medical Journal*.



**HAY'S Ginger Ale.**

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger, without any trace of the stickiness which so often characterises inferior makes of ginger-beer. It is a beverage which is sure to win favour wherever introduced."—*The Chemist and Druggist*.

**Medical and other Opinions on the**

**Ginger Beer made from HAY'S Soluble Essence.**

"An excellent effervescent drink."—*The Lancet*.

"Preferable to some wines we have tasted under the name of champagne."—*Medical Press*.

"Clear and transparent, and very pleasing to the palate."—*Medical Times and Gazette*.

"Has the purest Jamaica Ginger aroma, and ought to attain great popularity."—*The Chemist and Druggist*.

## THE COMPOUND ESSENCE

(Guaranteed Pure and Free from Capsicum).

This Essence, which is an addition of VANILLA, LEMON, and OTHER FLAVOURS to the above, is strongly recommended for the manufacture of Ginger Beer, Wines, &c., to which it imparts with the Ginger a Peculiarly Fine Fruity Flavour and Aroma.

Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

## THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of the FINEST

### GINGER ALE.

This Essence is strongly recommended for the manufacture of the finest Ginger Ale and Ginger Beer. It imparts, with the exquisite Ginger Aroma of the first-mentioned Essence, a peculiarly fine fruity flavour combined with the fullest amount of fragrance and pungency.

Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

## HAY'S GINGER ALE ESSENCE,

HIGHLY CONCENTRATED.

*This Essence is a complete Bouquet of the finest Ginger, Lemon, and other flavours, in a highly concentrated state.*

Ginger Beer and Ginger Ale made with this Essence will possess an amount of Aroma, Flavour, and Quality that have hitherto been without precedent, and that will be sure to command a large sale.

THE COST IN MANUFACTURE IS ABOUT ONE FARTHING PER DOZEN BOTTLES.

Trade Price, 9s. per lb.; 12 lbs. and upwards, 8s. 6d.

## GINGER ALE EXTRACT

SUPPLIES PUNGENCY, AROMA, COLOURING, AND FLAVOURING

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts an unusually Fine Flavour and Great Brilliancy, at a cost of a little under 1d. per dozen bottles.

Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s.

PREPARED BY

**W. HAY, Manufacturing Chemist, 4 REGENT'S TERRACE, HULL.**

Agents—Messrs. HEARON, SQUIRE & FRANCIS, Wholesale Druggists,  
5 COLEMAN STREET, LONDON, E.C.

W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.



10 per cent. discount on all Natural Waters (See List, post free).

10 per cent. discount on all Natural Waters (See List, post free).

# FIFTEEN GOOD REASONS WHY ALL CHEMISTS SHOULD JOIN THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION, LIMITED,

45 Gifford Street, LONDON, N., and Montpelier Gardens, HARROGATE.

- 1.—Because, taking into consideration the *superior quality* and the style in which the Waters are got up, they are *cheaper* than any supplied by other Manufacturers.
- 2.—Because *none but Chemists (Shareholders) can purchase the Waters direct*; consequently, when a Chemist has created a sale, he *cannot be undersold by Grocers*; whereas, if he purchase from other manufacturers, he will generally perceive that if he succeed in establishing a ready sale for *any brand, the same Waters* will soon be found to be offered by Grocers, Wine Merchants, &c., in his locality, at a lower price than that at which he can afford to sell.
- 3.—Because the Waters are acknowledged to be of the first and purest quality, being carefully filtered, and passed through silver-lined machinery, thereby preventing the possibility of any contamination whatever with injurious metals.
- 4.—Because, in addition to the ordinary Waters, Soda, Potash, and Lithia Waters can be obtained of B.P. strength, and every Chemist should stock some of these, as when Waters are ordered to be taken medicinally, B.P. preparations should always be supplied.  
N.B.—At the Food Exhibition, Agricultural Hall, 1881, the Association's B.P. Waters obtained the only Prize Medal, and at Bradford Exhibition, 1882, the Highest Medal was awarded.
- 5.—Because goods are invariably despatched on same day as order received, carefully and well packed in strong bin cases, thereby preventing breakage in transit. Town goods are delivered by the London Parcels Delivery Company, Limited, and empties collected free.
- 6.—Because the best Syphons, with tops manufactured from the purest tin, are used; also first-class ordinary bottles, carefully wired and labelled, and corked with superior corks.
- 7.—Because the labels state the exact strength of the Waters—an Essential for Chemists' Trade.
- 8.—Because every Chemist who joins is assisting in making the Association Waters famous, and is consequently helping his brother Chemist, while advancing his own interests.
- 9.—Because Chemists will learn what great power they possess when combined, and how well they stand in competition with other tradesmen, provided only they are loyal to each others' interests.
- 10.—Because about 650 Chemists have joined, and proved that they derive considerable benefit from combination.
- 11.—Because "ÆSCULAP" can be purchased in original packages by the Shareholders on very advantageous terms. CARRIAGE PAID to any part of the Kingdom.
- 12.—Because Seltzenes of first quality can, when required, be obtained for members at a liberal discount.
- 13.—Because about 650 Chemists ask you to join with them.
- 14.—Because the larger the combination, the larger the dividends.
- 15.—Because all NATURAL MINERAL WATERS can now be purchased through the Association at *cheaper rates* than can be procured elsewhere.

## MAY-DAVIS'S PATENT BOTTLING MACHINE,

For Aerated Waters, Beers, Wines, &c.

Particulars of this remarkable Machine for Corked Bottles, which, while producing the highest quality, dispenses with skilled labour and breakage of bottles, besides otherwise economising, may be obtained from the PATENTEES—MAY-DAVIS & CO.,

MINERAL WATERS MANUFACTURERS,  
ESHER ST., WESTMINSTER;  
OR FROM

HAYWARD TYLER & CO.,  
UPPER WHITECROSS STREET, E.C.

"ABSOLUTELY PURE."  
SEE ANALYSIS, sent post free on application.

## ELLIS'S RUTHIN WATERS.

ESTABLISHED 1825.

"CRYSTAL SPRINGS." Renowned for their purity for HALF-A-CENTURY. Situated on the premises, and exclusively the private property of the Firm.  
Soda, Potash, Seltzer, Lemonade, Aromatic Ginger Ale. For Gout; Lithia water, and Lithia and Potash Water. Corks branded—"R. ELLIS & SON, RUTHIN," and every Label is registered, and bears their Name and Trade mark.  
*Sold Everywhere, and Wholesale of*

R. ELLIS & SON, Ruthin, NORTH WALES,  
Manufacturers to the Royal Family.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

## LA BOURBOULE,

AN EMINENTLY RESTORATIVE MINERAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenics (28 millig. of arseniate) of soda per litre.

Dose: Half a glass to three glasses per day before or during meals.

A Regenerator for Weakly Children, and for Debility in Adults; also in Anæmia, Fatty Degeneration, Affections of the Skin and Respiratory Organs, and Intermittent Fevers. Employed as a drink and in gargles for Bronchitis and Sore Throat, and as a drink and lotion in Ringworm, Chaps, and Redness of the Skin.

Anglican Divine service on Sundays.  
London: GALLAIS & CO., 27 Margaret Street, W. INGRAM & ROYLE, 119 Queen Victoria Street, E.C. WILLIAM BETTS & SONS, 22 Henrietta Street, Cavendish Square. Liverpool: EVANS, SONS & CO.

## BOURNE WATER.

THE PUREST IN ENGLAND.

R. M. MILLS & CO.,  
BOURNE, LINCOLNSHIRE,

Manufacture all kinds of Aerated Waters from this celebrated Artesian Spring.

Dr. ANDERSON'S Tissue Phosphate Tonic Water, an Aerated Tonic Beverage containing all the Mineral Elements of Nutrition (no Iron), and assisting Digestion in a most marvellous degree.

SOLD BY THEIR AGENTS THROUGHOUT ENGLAND. PRICE, WITH DESCRIPTIVE PAMPHLETS, UPON APPLICATION.

SPECIAL AGENTS IN LONDON—

Messrs. INGRAM & ROYLE, Victoria Street, and

Messrs. HARDY & Co., 42 Fenchurch Street.

# KINMOND'S

## APNEUMATIC

# MINERAL WATERS

SPECIALITIES:

GINGER ALE (AROMATIC).

ORANGE CHAMPAGNE.

FRUITY CHAMPAGNE.

SPARKLING PHOSPHORETTA.

Made by an entirely New and Special Process,

SO THAT THEY IMPROVE BY KEEPING.

Trade List post free from the Manufactory,

## LEAMINGTON.

"FOUR FIRST-CLASS MEDALS AWARDED"

For very superior quality, make, and special excellence in fluid.

## THE BRITISH SYPHON

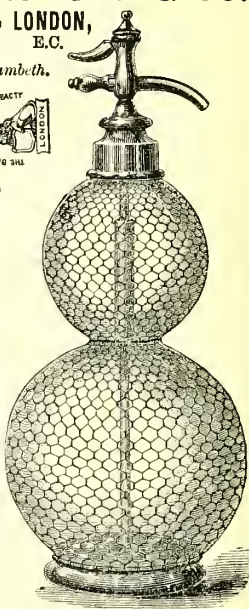
EUGSTER & KOERTGEN, MANUFACTURING CO.  
PROPRIETORS.

2 GRESHAM BUILDINGS, LONDON,

Works: E.C.  
Wickham St., Lambeth.



Specimen of Trade Mark engraved on the Siphon Bottles by the acid process at 1/6d. and 3/4d. per bottle extra.  
Name stamped on the metal tops free for orders of one gross.  
IMPORTANT.—In ordering our Seltzogenes through Agents, distinctly state that you require the "Lion and Shield" brand, and see that you get it, as often others inferior are substituted.  
Our Seltzogenes are stamped thus—  
GUARANTEED PERFECT, and of first-class workmanship.



### SYPHONS.

Short Lever... .. 22/6 per doz. net.  
Long " " " " 24/0  
White, Blue, Amber, or Green Bottles,  
Cylindrical or Oval shaped.  
Silver-plated tops, 9/- per doz. extra.

### SELTZOGENES.

3 pint wire covered, 13/-; cane covd. 13/6  
5 " " " " 18/-; " " 19/-  
8 " " " " 30/-  
Silver-plated Wire or Top, 5/- extra.  
Drop Cups, Measures, Fittings for Repairs, &c. Liberal discount.

Each Seltzogene and Siphon thoroughly tested before sent out.  
All metal warranted free from lead.

CELEBRATED!

## D. FÈVRE SELTZOGÈNES AND POWDERS

For immediate production of Soda Water, Eau de Vichy,  
Sparkling Lemonade, and Aerated Wines.

## D. FÈVRE, 398 RUE ST. HONORÉ, PARIS,

Sole Inventor & Proprietor of the Article and Name "SELTZOGENÈ,"

THESSIER-FÈVRE, Son-in-Law, Manufacturer.

### WHOLESALE PRICES.

Celebrated D. Fèvre Seltzogene.	{	3 pint, wire covered..	12s. 0d. each.
		3 pint, cane covered..	12s. 6d. "
		5 pint, wire covered..	18s. 0d. "
		5 pint, cane covered..	19s. 0d. "
		8 pint, wire covered..	30s. 0d. "

Liberal discount allowed.

Case and Packing..	12 Seltzogenes, 3 pint size	4s. 0d. net.
" " " "	" " " 5	5s. 8d. "
" " " "	" " " 6	9s. 8d. "

Celebrated D. Fèvre Powders for the Seltzogenes.	{	3 pint, per doz. boxes of 12 charges,	24s. 0d.
		5 " " " "	36s. 0d.
		8 " " " "	60s. 0d.
Pure Tartaric Acid and Bicarbonate of Soda in the highest state of perfection.	{	3 pint, per doz. boxes of 10 charges,	20s. 6d.
		5 " " " "	30s. 6d.
		8 " " " "	45s. 2d.

Liberal discount allowed.

**EXTRA:—Taps, Tubes, Valves,  
Washers, &c.**

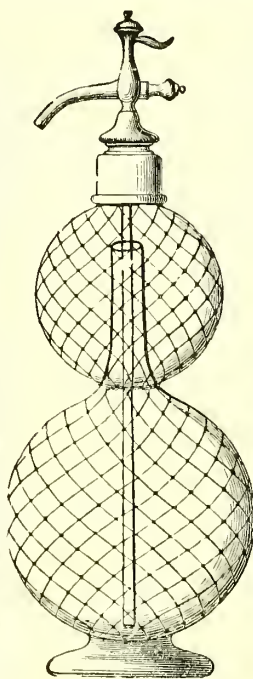
DIRECTION FOR REPAIRS.

DRIP CATCHERS, FITTINGS, MEASURES, &c.

ALL MY GOODS ARE TESTED.

ILLUSTRATED CATALOGUE FORWARDED FREE.

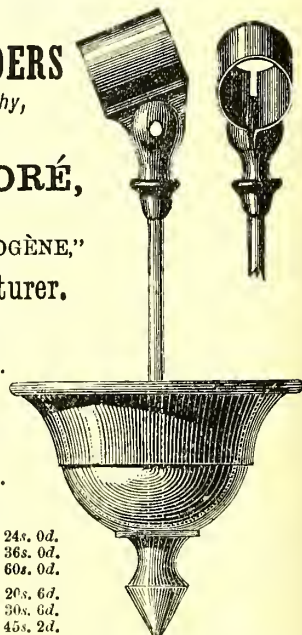
MELBOURNE EXHIBITION,  
FIRST ORDER OF MERIT awarded to THESSIER-FÈVRE.



TRADE MARK.

*D. Fèvre*

REGISTERED.



DRIP CATCHERS

for  
D. FÈVRE SELTZOGÈNES.  
8s. 6d. per dozen.

Registered April 1, 1879,  
No. 333,951.

**THESSIER-FÈVRE,  
SOLE MANUFACTURER.**





# EUGENE GERAUT & CO.,

PATENTEES AND MANUFACTURERS OF  
SODA WATER MACHINES, FILLING MACHINES,  
SYPHONS, SELTZOGENES, &c., &c.,

1 & 2 Corporation Buildings, Farringdon Road, London, E.C.



## NEW PATENT LEVER SELTZOGENES.

For immediate production of Eau de Vichy, Soda Water, Sparkling  
Lemonade, and Aerated Waters.

First introduced by EUGENE GERAUT & Co. in 1853.

### WHOLESALE PRICES

as follows:—

3-pint Size, Wire, 13/0; Cane, 13/6  
5-pint " " 18/0; " 19/0  
8-pint " " 30/0; " 32/0

3-pint Size, strongly silver-  
plated, richly decorated

Porcelain stands .. each 30/0

5-pint ditto .. .. . 38/0

8-pint ditto .. .. . 48/0

Our well-known Seltzogenes are improved yearly, and have already  
stood a public test of upwards of Twenty Years, and are acknow-  
ledged as **THE VERY BEST.**

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Liberal discount allowed off quan-  
tities upwards. Strongly silver-  
plated top, 5/0 extra.

Powders for the above.

3-pint size, in 12 Charges 10 Charges  
hand-one la- Boxes. Boxes.

belled boxes 21/0 18/6  
3-pint ditto .. 20/0 26/0

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Liberal Discount for Quantities.

## SYPHONS.

Clear or coloured glass (white, blue, green,  
or yellow), pure ENGLISH BLOCK TIN  
TOPS, with piston or cap.

22/6

per dozen, for quantities of not less  
than one gross.

Packing in Cask, 5/ per gross.

The Name marked on the metals free of charge  
for quantities of not less than one gross.

The Name engraved with Trade Mark, from 1/6 to  
2/6 per dozen extra.

Illustrated Catalogue on application.



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W. A. ROSS, the Original Patentee and Maker of  
The Celebrated Belfast Ginger Ale, cautions  
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*Ross's Royal Ginger Ale*  
AND  
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**AERATED WATERS,**  
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Alkali), and LITHIA WATERS,  
LEMONADE AND GINGER ALE.

Each Bottle is protected by a Label bearing the Signature  
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Purity and Excellence of the Water certified by Analysis  
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NEW AND IMPORTANT DISCOVERY.

## GINGER ALE

FROM PURE JAMAICA GINGER.



SHIRE GINGER ALE, from Pure Jamaica Ginger. Is Non-Intoxicating.

ABSOLUTELY PURE.—  
See Analysis by Drs. J. H. HASALL,  
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the difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the  
same time having a CLEAR and SPARKLING DRINK, has, after much labour  
and expense, been thoroughly overcome by

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**CLUB SODA, AND**  
**MINERAL WATERS,**

As supplied to Her Majesty's Imperial Houses  
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Have been Awarded NINETEEN GOLD AND  
PRIZE MEDALS at the various International  
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PRICES AND TERMS ON APPLICATION TO—

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It is manufactured especially for sale by Chemists  
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Six doors from Hanway Street.

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FIRST PRIZE (SILVER MEDAL) FOR TRUSSES AWARDED BY THE  
WORSHIPFUL COMPANY OF CUTLERS OF THE CITY OF LONDON, MAY, 1879.

FIG. 1.

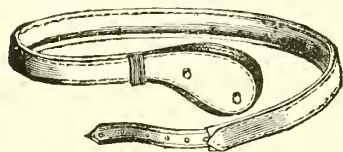


FIG. 4.

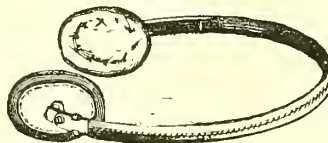
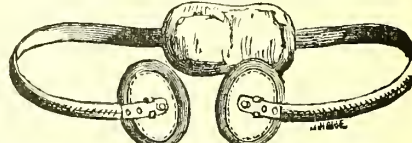


FIG. 5.

**TRUSSES.**

Circular Trusses, single, as Fig. 1, basil and chamois or basil and moleskin	per doz.	£1 1 0
Circular Trusses, double, basil and chamois or basil and moleskin	per doz.	1 14 0
with extending backs	per doz.	2 14 0
Salmon & Ody's Expired Patent, single, Fig. 4	per doz.	1 10 0
" " " double, Fig. 5	per doz.	3 0 0
Moc-Main Lever, single	each	0 8 0
" " " double	each	0 13 6
Coles's Expired Patent, single	per doz.	0 6 0
" " " double	per doz.	0 12 0
Scrotal Trusses, basil and chamois or moleskin, single	per doz.	0 4 0
" " " double	per doz.	0 7 0

**SUSPENSORY BANDAGES.**

No. 1. Cotton Bags and tape under-strings	per doz.	£0 8 0
2. Cotton Oxonian, with drawing-strings	per doz.	0 10 0
3. Silk Bags and tape under-strings	per doz.	1 1 0
4. Silk Oxonian, with drawing-strings	per doz.	0 18 0
5. Silk Oxonian Bags bound with elastic	per doz.	1 4 0

**SUSPENSORY BANDAGES—continued.**

No. 6. Silk Oxonian, superior quality, bands of buff jean, with drawing-strings	per doz.	£1 4 0
7. Silk Bags, to button on, with tape under-strings	per doz.	1 1 0
8. " " " under-strings to button	per doz.	1 4 0

**ELASTIC STOCKINGS, KNEE-CAPS, ETC.:**

Manufactured expressly for  
Export, and warranted to stand a  
hot climate better than any others  
in the Market.

	Silk.	Super. Silk.	Cotton.	Super. Cotton.
Stockings	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Knee-caps	0 10 0	0 15 0	0 6 0	0 7 0
Calf-pieces	0 6 6	0 10 6	0 4 0	0 5 6
Socks	0 7 6	0 10 0	0 4 6	0 6 0
Wristbands	0 5 6	0 8 6	0 3 10	0 5 0
Knee Stockings	0 2 3	—	0 1 8	0 2 0
Belts, to draw on	0 16 0	1 5 0	0 9 2	0 12 1
	0 16 6	—	—	0 12 0

The above may be obtained direct from the Manufacturers, or from their Wholesale and Export Agents,  
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Also VARNISHES of every Description

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## MIXED FOR USE.

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Ball denotes

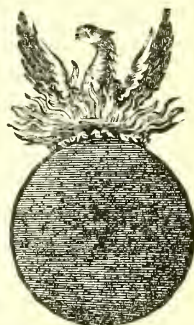
MARK.  
Colour of Paint.

All Colours in 1, 2, 4, 7, and 14 lbs.

All Colours in 1, 2, 4, 7, and 14 lbs.

SOFT SOAP, GREASES, LINSEED

MEAL, AND CRUSHED LINSEED.

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Petroleum, Benzoline, Gasoline, Turpentine, Olive, Colza, Cod, Castor, Seal, Whale, and Sperm  
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The most beautiful and perfect Illuminator.

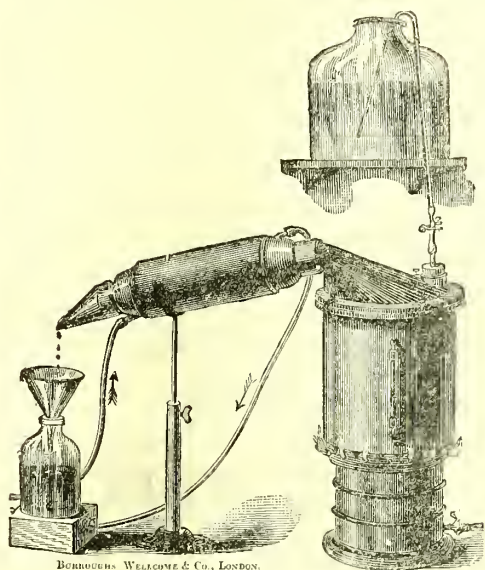
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# THE "REMINGTON" PHARMACEUTICAL STILL

(Invented by Professor J. P. Remington, Philadelphia  
College of Pharmacy, U.S.A.)

SIMPLICITY. ECONOMY. DURABILITY.  
EASE OF ADJUSTMENT. POWERFUL CONDENSATION.  
RAPIDITY OF ACTION.



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PRICES, in Tinned Copper .. .. £7.  
" Nickel Plate .. .. £9.  
*Special Prices for Larger Stills.*

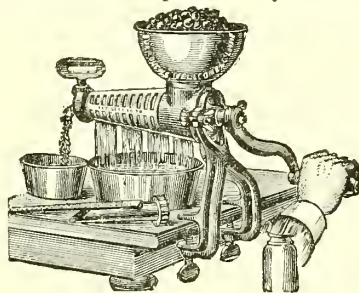
Many improvements have been made in this Still, which adapt it better to Pharmaceutical wants than the still which was first presented to the profession.—See *American Journal of Pharmacy*, January, 1878. The Still shown in the cut is the NEW FORM, the Still body holding over three gallons; the CONDENSER has seven straight tubes surrounded with the cold water introduced by a rubber tube from a hydrant or bucket of water placed higher than the Still, and carried off as it becomes warmed by another tube as indicated by the arrows. BY THE PHON ARRANGEMENT SHOWN IN THE CUT, it is possible to feed the Still from a reservoir, whilst distillation is in progress, thus saving a three-gallon Still where a much larger one would have been necessary.

The Still may be set into a kettle partly filled with water and thus used as a WATER BATH, or a shallow dish with flat tin which accompanies the Still may be placed between the brass ring bands and clamped securely, as explained in the article published in May (1879) number of *American Journal of Pharmacy*.

# THE ENTERPRISE TINCTURE PRESS.

*Specially adapted for Coarse and Fibrous Drugs.*

The principle upon which the Press operates is, that the drug is acted upon in a continuous thin layer, which is forced forward by each revolution of the screw into smaller and smaller space, the leverage yielding a force so powerful as to extract almost the entire moisture, delivering the residue of suitable drugs with almost crisp dryness, and, as experience has shown, it saves a greater amount of Tincture (very important in the case of Tincture of Opium and other expensive drugs) than even the most powerful Hydraulic Press. So



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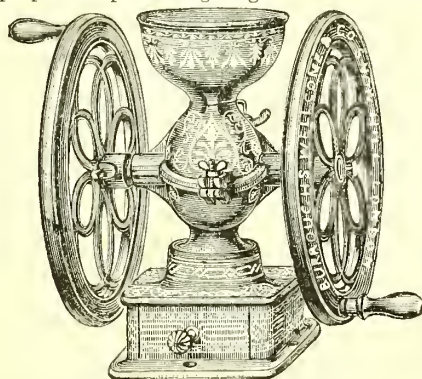
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Constructed on an improved principle, the cutters being easily removable for inspection, or for cleaning. It may be regulated to grind to any degree of fineness or coarseness, by simply turning a single thumbscrew. Is adapted to almost any dry pulverizable substance; it works rapidly and is economical.

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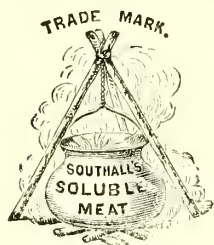


Prices { Plain .. 40s., 60s., 100s. } each.  
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All of the Articles mentioned above may be obtained from any respectable wholesale firm, or from  
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UNIVERSAL EXHIBITION, PARIS, 1878—AWARD, "HONOURABLE MENTION."

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BEEF.

CHICKEN.

MUTTON.

VEAL.

1/8 3/

2/6 4/6

2/ 3/8

2/ 3/8

14/ 27/

21/ 41/

17/ 32/

17/ 32/ per doz.

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THE "AQUARIUM" SEA SALT, neatly packed in boxes, to retail at 1/ 1/6, and 2/6 each; 9/ 13/ 22/ per doz of 13 boxes **THREE GOLD MEDALS.**

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Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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A portable, elegant, and efficient vehicle for the Administration and Use of Important Medicines.

Specially adapted to the requirements of Medical Practitioners in the Country and the Colonies.

The universal and increasing demand for this novel and effectual method of carrying, in the smallest possible compass, a supply of the most important medicaments to be found in the surgery has induced Messrs. SAVORY & MOORE to effect a

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which are now sold in Sheets of *Twenty-four Lamels each* at 1s. 3d. per Sheet, Quinine and Emetia Lamels excepted. Suspended in a little water, the Lamels are readily taken, and without the slightest taste.

A SMALL POCKET LETTER CASE will contain an ample supply (several hundred doses) of the Lamels of the most varied character and description.

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HYPODERMIC  
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Consist of small (SQUARE) discs, impregnated with a definite proportion of alkaloids, &c.  
Issued in Tubes of 25 Discs, price 2s. 6d.

The chief feature of these Discs is their instant solubility, by which hypodermic solutions can be immediately obtained of uniform and reliable strength; they keep good for an unlimited period in their dry state, and are extremely portable.

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THE CHEMIST AND DRUGGIST is supplied regularly by arrangement with their respective Councils to all members of the following societies:—  
The Pharmaceutical Society of Victoria.  
The Pharmaceutical Society of New South Wales.  
The Pharmaceutical Society of Queensland.  
The Pharmaceutical Society of New Zealand.

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We shall be glad to receive orders to stitch-up circulars for our next issue (July 14, 1883). We can guarantee the distribution of these to TEN THOUSAND firms of chemists and druggists, wholesale and retail, at home and abroad. Correspondence on this subject is solicited.

We have discontinued our clubbing arrangement with the *Pharmacist* of Chicago, and cannot in future receive subscriptions for that journal. Our clubbing arrangement with the *Druggists' Circular* of New York is, however, still in force. We receive subscriptions for the two journals (THE CHEMIST AND DRUGGIST and the *Druggists' Circular*) for 10s. 6d. per annum, post free to any part of the world. They in return receive subscriptions for the same two journals for \$3.50 per annum. Subscribers to either journal can be entered for the other by payment of the balance—that is, subscribers to THE CHEMIST AND DRUGGIST can receive the *Druggists' Circular* for a year for 4s. 6d., and subscribers to the *Druggists' Circular* can receive THE CHEMIST AND DRUGGIST for a year (including one Diary) for \$1.90.

## THE MONTH

The annual meetings of the Pharmaceutical Society and the Trade Association took place last month, and are reported in subsequent pages. We summarised the reports of these bodies in our last number. The following are some details showing the financial position of each body.

The Pharmaceutical Society reports an income of 15,611*l.* 8*s.* 7*d.*, of which 701*l.* 17*s.* 1*d.* is interest; 4,752*l.* 6*s.* 3*d.* comes from subscriptions; 4,760*l.* 16*s.* from examinations; 5,079*l.* 9*s.* 7*d.* from advertisements in the Journal and sundry sales thereof; 52*l.* 10*s.* from registration fees; 160*l.* 10*s.* for sales of the Register (most of which is from the Government); 17*l.* 11*s.* for sales of the Calendar and 86*l.* 8*s.* 8*d.* for penalties recovered.

The year's expenditure amounted to 14,314*l.* 5*s.* 6*d.* The chief items were 2,267*l.* 3*s.* 6*d.* for examinations; 4,662*l.* 4*s.* 2*d.* spent on the Journal; law costs, 169*l.* 3*s.* 5*d.* the lectures and laboratory cost 338*l.* 12*s.* 6*d.*; the library cost 384*l.* 6*s.*; the museum 367*l.* 15*s.* 7*d.*; the Scotch branch figures for 287*l.* 16*s.* 4*d.*; and postage for 914*l.* 12*s.* 9*d.* (three-fourth of which is for postage of Journal); salaries amount to 1,661*l.* 17*s.*; and the rent and house expenses generally to 1,796*l.* 11*s.* 3*d.* The travelling expenses of the Council reach 411*l.* 12*s.*, and the Council's refreshments 45*l.* 11*s.* The *conversazione* cost 204*l.* 1*s.* 7*d.*, and the pharmaceutical meetings 52*l.* 4*s.* The Register involved an expense of 167*l.* 4*s.* 9*d.*, and the Calendar 111*l.* 2*s.* The balance is made up of sundry expenses.

The Society has a general fund of 23,500*l.*, a Benevolent Fund of 19,665*l.*, 2,050*l.* to the credit of the Bell Memorial Fund, 400*l.* on account of the Hanbury Memorial Fund, 100*l.* for the Pereira Memorial Fund, and 300*l.* for the Hills Prize Fund. For the Benevolent Fund 563*l.* 5*s.* 2*d.* was received in dividends, 388*l.* 1*s.* in donations, 1,956*l.* 12*s.* 5*d.* in subscriptions, and 300*l.* in legacies. The sum of 1,187*l.* 10*s.* was expended on thirty-six annuitants, and 411*l.* in casual grants.

The Chemists and Druggists' Trade Association had 413*l.* 17*s.* 2*d.* net assets at the beginning of its last financial year, and received 685*l.* 15*s.* from 2,743 subscribers, and 63*l.* 4*s.* in donations; spending 118*l.* 3*s.* 4*d.* in law costs, 334*l.* 19*s.* in salaries, 143*l.* 18*s.* 3*d.* in travelling expenses, 97*l.* 18*s.* 10*d.* in stationery and printing, 94*l.* 4*s.* 1*d.* in postage, and a few other sundries, making a total of 903*l.* 9*s.* 3*d.* The Association carries forward to the current year 259*l.* 7*s.* 5*d.*

In this number we complete our reviews of the new Pharmacopœias of the United States and Germany. In view of the revision of the British Pharmacopœia, we shall be glad to receive and publish suggestions for the improvement of that work. Such suggestions will be sure to receive the attention they may deserve.

In view of the very numerous questions we receive relative to hair-restorers, hair-dyes, and the like, we have prepared an article in which the *rationale* of these is fully detailed, and which will, we believe, answer most of the questions which are put to us. (See page 286.)

We are able to give this month special reports of the International Exhibition at Amsterdam, of the Hygiene Exhibition at Berlin, and of the Fisheries Exhibition at Kensington.

An important communication from Lord Edmond Fitzmaurice respecting the admission of patent medicines into Italy will be found among our Correspondence.

# CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

THE subjoined report refers to the competition announced in March last, and omitted from our May number. Samples for the next competition were sent out last month, and will be reported on in our July issue.

## REPORTS.

The alloy issued to our correspondents for analysis in March consisted of equal parts of the metals mercury, tin, and zinc. The metals employed in the preparation of the alloy were nominally pure, but analysis revealed the presence of impurities, notably iron and arsenic.

A very superficial acquaintance with the appearance of the alloys of mercury would enable the student to recognise this particular specimen as a mercury alloy or amalgam. The ease with which it could be rendered semi-fluid betrayed the presence of the only one of the common metals that is liquid at ordinary temperatures. Several of the amalgams of mercury exhibit a distinct crystalline character, and may be regarded as definite chemical compounds, but they all dissolve easily in an excess of mercury, forming pasty or semi-fluid masses. The facility with which many of the alloys are dissolved in the metal renders metallic mercury liable to impurity. Mercury in a pure state is not oxidised by exposure to air, but a mere trace of any of the more oxidisable metals causes it to lose its lustre rapidly, and renders it unfit for many of the purposes for which it is employed. If globules of impure mercury are allowed to run slowly down a slightly inclined surface, they will be observed to leave a tail behind, and to move more sluggishly than globules of the pure metal. Most impurities can be removed by exposing the mercury to the action of dilute nitric acid, a solution of mercuric nitrate, or strong sulphuric acid, but distillation is often necessary, and even then great care must be taken to prevent the impure mercury from being mechanically carried over; this is usually done by covering the surface of the mercury in the retort with a layer of iron filings. Although the boiling-point of mercury is high, a vapour rises from it at ordinary temperatures, and diffuses into the air. Mercurial ointment contains mercury in a state of very minute division, and this, too, evolves a metallic vapour. The vapour of mercury is decidedly injurious to health, and persons who are liable to be exposed to it should work in thoroughly ventilated rooms.

On heating a portion of the amalgam in a glass tube closed at one end, a sublimate of mercury in the form of minute globules collected in the cooler part of the tube. By employing a bent tube after the manner of a retort, the mercury could be separated so completely that only a minute trace remained with the other metals. For analytical purposes this method is not, however, to be recommended, as, of course, other metals as well as mercury may be volatilised, consequently the analysis would not be complete without a thorough examination of the sublimate. It is therefore more convenient to proceed at once with the wet analysis of the original alloy. In former cases we have pointed out the advantage arising from the use of nitric acid as a solvent of metallic substances. By employing this reagent the analysis was greatly simplified, as a solution was readily obtained containing the zinc and mercury, while the tin remained undissolved as insoluble

metastannic acid. The analytical characters of the two metals in the solution are sufficiently distinct to admit of their being separated and detected with great ease and certainty. It may be observed that the filtration of the nitric acid solution is slow and difficult. The operation is facilitated by diluting the liquid largely with water and then boiling for a few minutes; when the liquid has somewhat cooled it will filter without difficulty.

The reports sent in this time are highly satisfactory as analyses: very few students failed to detect all the chief constituents of the alloy, and it is only as regards the impurities that there is any marked variation in the results obtained. The mode in which the results are expressed is, on the whole, less commendable, some of the papers being hastily and carelessly prepared. It is noteworthy that a paper in French from a foreign correspondent is about the most neatly arranged, and contains a very clear and concise account of the analysis.

## PRIZES.

The First Prize for the best analysis has been awarded to E. E. HALL, 37 Digbeth, Walsall; and the Second Prize to HENRY TREMBATH, 11 The Terrace, Penzance, Cornwall.

## Marks Awarded for Analyses.

E. E. Hall (first prize)	..	..	..	..	..	95
H. Trembath (second prize)	..	..	..	..	..	93
J. Laurie	..	..	..	..	..	90
M. Delacre	..	..	..	..	..	90
Albert Taylor	..	..	..	..	..	90
Infilio	..	..	..	..	..	90
Vigbyor (Lytham)	..	..	..	..	..	90
Gerth Gowland	..	..	..	..	..	90
W. Hunter	..	..	..	..	..	88
W. Miller	..	..	..	..	..	88
N. H. Sutton	..	..	..	..	..	85
G. Byrne	..	..	..	..	..	85
J. P. Watson	..	..	..	..	..	85
Alfred Bayley	..	..	..	..	..	85
Vigbyor (Preston)	..	..	..	..	..	82
F. W. P.	..	..	..	..	..	75
Nemo	..	..	..	..	..	75
A. E. S.	..	..	..	..	..	50

## TO CORRESPONDENTS.

*Prizes.*—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

\* \* \* All communications should include the names and addresses of the writers.

*J. P. Watson.*—The plan of separating the mercury by the use of acids in the manner described does not serve any very useful purpose, since an examination of the mercury must subsequently be made; moreover, the separation is far from being complete.

*A. Bayley.*—The preliminary examination in the dry way should not be omitted. The information gained by a few tests that take very little time and do not require much material is too important to be neglected. The preliminary examination is especially important to the student, who should never lose an opportunity for practising these simple tests. It is a great thing to be able to make a rough analysis of almost anything in a few minutes and with the simplest apparatus.

*F. W. P.*—See preceding remarks. Mercury could not have escaped notice if you had heated a portion of the amalgam in a tube closed at one end. You deserve some credit for having persevered after the accident, which would have disheartened most students.

*W. Hunter.*—The manganese reaction that you refer to is very delicate and most characteristic; but, like most reactions of the sort, you require to make yourself familiar with it by actual experiment and not by merely reading a description of it, otherwise you will have little confidence in your decisions. Try the experiment with a very minute quantity of any manganese compound.

*Nemo.*—You would have found it an advantage to separate the tin in the manner referred to above, though the method you employed was capable of giving correct results if carefully carried out.

*A. E. S.*—You actually separated the tin, though you did not recognise it. Try the analysis of tin-foil, solder, or any other alloy of tin that you can procure: you will find the practice most instructive.



## Pharmacalia.

### OPIUM IN ROUMELIA.

GREAT success has attended the cultivation of the poppy in Roumelia, details of which are supplied by H. M. Consul at Salonica. The first attempt was made about seventeen years ago by a Turkish farmer at Istip, who, having brought a handful of the seed from Asia Minor, was altogether successful in his experiment. Dating from the year 1866, a very large industry in opium has been inaugurated. The Roumelian preparation is extremely pure, containing about 11 per cent. of morphia, while that of Smyrna yields scarcely 9 per cent. Last year the production of opium from this province reached the respectable figure of about 135,000 lbs.; besides an enormous amount of poppy-seed; most of the drug found its way to England, while most of the seed was exported to Germany and France.

The Turkish Government, in this respect alive to its own interests, remits the tithes on opium and poppy-seed for one year in the case of lands that are thus sown for the first time, and distributes full instructions on the process of cultivation, extraction, and preparation. The seed is sown from September to March in districts where there is no hoar-frost in spring and autumn; but in places where there is hoar-frost, September and the spring are selected after the chilly weather is passed.

Clay soil and damp are fatal to success; the ground is well manured, and after the opium crop has been removed wheat sown in the same field will be abundantly productive. The soil must be thoroughly broken up, hand-sown, and again perfectly disintegrated and mixed with the seed.

As soon as the plants begin to appear they are carefully separated, to allow sufficient space for growth, and the soil is hoed and weeded. The pods are at first green in colour, the hue being changed to yellow on maturity. Just before this colour change takes place a thin, watery, light green film forms over the pod, which itself becomes firm. This is the time selected for the collection of the juice. An incision is made in the pod with a knife adapted to the purpose, beginning from the middle and going round the edges, leaving a space of about a finger's breadth. The white, milky, bitter-tasting fluid then exudes. Gradually acquiring more consistency, its colour deepens, and in twenty-four hours it resembles coffee, and is thick as paste. Scraping this off with a blunt knife, the paste is put into a poppy-leaf until from twenty to thirty drachms have been collected, when the edges of the leaf are turned up to preserve the contents. The work of cutting commences early in the afternoon and continues until nightfall. The labourers set to work on the following day, as not more than twenty-four hours must lapse between making the incisions and collection. Unripe pods must wait.

Attention is paid to certain details, so that the exact season for collecting opium may not be missed. The whole work must be performed in eight or ten days, and the pods must be cut precisely at the right time, or there will be no yield of opium. High wind and rain are equally to be avoided, for both either scatter or destroy the juice as fast as it exudes from the cut seams. After the crop has been gathered the pods change to a rose colour, when the plants are taken up by the roots, one by one, and collected in small bundles. These are bound with a young green wither, placed upright in the ground with their roots covered, and remain for a few days until the seed contained in the pods becomes ripe and dry. The pods are then threshed and the seed collected. Another method is to sever the pods

from the stem, collect, dry, and thresh. No part of the plant is wasted; from the pods reduced to ashes a fluid is extracted, used for bleaching purposes, and said to be effective. The oil is extracted from the seed, and the residue is given to buffaloes, cows, and black kine to promote the yield of milk.

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### BENTHAM AND HOOKER.

A curious and characteristic literary confession, read some time ago, but only just now published, has emanated from Mr. George Bentham, the distinguished botanist. It relates to the exact share of work to be credited to the joint authors of that fine production, "*The Genera Plantarum*," which was issued under the sanction of his own name and that of Sir Joseph Hooker. The public, scientific or otherwise, are always interested in personal details which belong to literature. The excitement as to who might be the mysterious author of the *Waverley Novels* by no means lessened their acceptance, and when two celebrated novelists together brought out a Christmas story there was no small ingenuity displayed in endeavouring to trace where Charles Dickens ended and where Wilkie Collins began. All will recollect the amusement created when Alexandre Dumas was accused of being too much assisted in his romances; his next publication bore on the title-page, "By A. Dumas, *Seul*."

Mr. Bentham takes the opportunity, not only of stating the precise limit of his work, but of enunciating his literary creed. He wishes "*The Genera Plantarum*" to be considered absolutely as a joint production, but, indeed, the only joint work in which he has ever been engaged.

He very early saw the diminished responsibility and other inconveniences of partnership botany, and during his long working time refused entering into any such without the special conditions which for once induced him to alter his determination. In some catalogues he appeared as joint author of botanical papers or work, but always by some error. There was Bentham and Ersted, on the botany of Central America—but it was really Ersted's, in which were incorporated determinations and descriptions of his specimens, which Mr. Bentham supplied. Our English author is bent on having things right, and he will accept no palm to which he is not entitled. "Apart from these descriptions," says Mr. Bentham, "the papers are in Danish, a language with which I was once familiar as to reading, but in which I never wrote." On the other hand the *Flora Australiensis* of Bentham and Mueller was entirely and exclusively the work of the first named, though the numerous specimens collected by the latter into the Melbourne Herbarium, the whole of which he lent, seemed to deserve some special recognition. Joint work was impossible where consultation was prevented by the great distance which separated the two; four or five months being requisite to obtain an answer to the simplest question. Actual examination of specimens was the sole basis of the descriptions; the method and classification were Mr. Bentham's own.

With regard to "*The Genera Plantarum*" the case was different. Endlicher and Meissner had become antiquated, both, and especially the latter, were in a great measure mere compilations. To supply the deficiency was too vast an undertaking for one single hand, and Hooker suggested united forces. Here there was nothing to fear from collision, and but little from any permanent separation. Hooker had unique experience in the study of living tropical and Southern extra-tropical vegetation and unrivalled facilities at Kew. Other orders, chiefly those which comprised very numerous small genera, would require more persevering and uninterrupted work than an official director had the leisure

to bestow. Hence the plan of co-operation was settled, and a quarter of a century was spent in the elaboration of "The Genera Plantarum." With this mutual understanding printing was commenced, a friend—the Rev. M. J. Berkeley—undertaking the correction of the latinity. Then follows a brief analysis of the work. The Polypetales were pretty equally divided. Hooker worked up Cruciferae, and Bentham (as might be expected) took Leguminosae. Hooker gave close attention to Rubiaceae, while Bentham endeavoured to reduce to some order the intricate, almost endless, details of the innumerable closely-allied, and often scarcely-distinct genera of Compositae.

So matters went on till Hooker was prevented, for a time, from a continuous detailed elaboration of genera by pressure of official duties and occasional absences. It would weary to record all particulars of this immense undertaking. Some notion may be formed of its laborious character from the concluding statement. Both authors are again hard at work, and have arrived at the Monocotyledons. This section appeared at first so formidable, that in the uncertainty of being enabled to carry it through to the end, they determined to commence with the most difficult orders. Hooker attacked the palms, and, notwithstanding his great previous knowledge of the subject, and his close study of the living collections at Kew, much more time had to be devoted to their examination, involving a great deal of foreign correspondence. In the mean time Bentham gave more than twelvemonth's constant and uninterrupted labour to the Orchidæ, and at least as much to the Gramineæ. Throughout the work, unless there is a special indication to the contrary, characters were drawn up from actual examination of specimens.

One would be tempted to severely question "the inconveniences of partnership botany" when such a magnificent result has been obtained. Divided responsibility in small matters is a double element of weakness; but when the field of observation and record is too vast for single-handed research, union most certainly is strength. Nor is there the slightest loss of individual reputation. Hanbury and Flückiger produced a *Pharmacographia* better than either could have done alone; and Bentham and Hooker have mutually increased their renown as botanists by concerted action.

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#### THE PHARMACEUTICAL ANNIVERSARY.

Once more a retiring Council has met its constituents; received their criticism, kind or otherwise, and found itself re-elected. For this system of continuity various reasons might be alleged: first, that the members generally are quite satisfied with the proceedings of the last year; secondly, that there was little choice; and, thirdly, that there are very many pharmacists who care positively nothing about such matters. Seeing, however, that each individual in the Society has a share in the choice of his representatives, and that the country specially may elect whomsoever they think fit, a degree of unreality attaches itself to the complaints which never find utterance save at an anniversary. It was a lovely May morning (this is fact, not poetry) when we wended to the Square; the Council were unable to attend in their usual "hansom" manner, for the street was being repaved with wood, and the home of pharmacy could only be approached on foot. Inside there was a slight disappointment; the attendance was not nearly so numerous as might have been expected; neither the anticipated discussion on legal topics, nor on the claims of British Pharmacy to be represented in the construction of a *Pharmacopœia*, attracted more than a respectable audience. Down below there was a fair muster of town and country visitors;

but the upper benches exhibited what nature is said to abhor—a vacuum. The chair was occupied by the President, capable; self-reliant; perfect. No one knows better how to regulate a public meeting, and one may accept a certain positivism of manner when the direction is so sure and fair. The customary presidential address was omitted, a running commentary on the report being substituted in its place. The members therefore knew the subjects to which the Council wished to draw attention, and were in a position to discuss them *seriatim*.

It was very kind of Mr. Vizer to trouble the waters, for without some such intervention the discussion would have languished. We could hear his genial voice, but being situated in the ground-floor annexe we were unable to catch the speaker's eye. He moved, amongst other things, that the syllabus of the proposed curriculum should be so altered as to enable a student to pursue the necessary studies during the three years' apprenticeship if so desired. It seemed to him exceedingly hard that a young man entering a business should be compelled to pass three years before he had any possibility of passing the examination, and that after he had spent three years another twelve months should have to be spent in preparing and going through a certain course of lectures and practical chemistry, which possibly he might have had an opportunity of pursuing during his apprenticeship. Then our excellent friend, Mr. Bland, believed that if the curriculum were passed and became law it would be a heavy blow, and great discouragement to the profession of pharmacy. Here was a syllabus of lectures to be gone through by the student, which occupied, simply in cataloguing the names of the subjects, two pages of the Journal. A lifetime would not be sufficient to master such an array. Young men, fresh from their apprenticeship, had not only in three years to acquire a good practical knowledge of a chemist's business, but they were supposed to come and swallow down the whole of these subjects in two or three years. It would have been simpler to have prescribed the last edition of the *Encyclopædia Britannica*, and there would have been the same glorious reward—the power of selling a pennyworth of oxalic acid.

For an instant let us glance at two points: First, the means described; secondly, the reward to be obtained. This the indulgent reader will perceive is quite as good as a sermon. No person is under an impression that the subjects mentioned in any syllabus are meant to be mastered exhaustively by a student—that is a proficiency which no examiner would exact, and which no student could attain. The hapless apprentice is not required to be Roscoe, Hooker, and Flückiger rolled into one. The branches of study are wisely indicated, lest the student should wander over the whole field of knowledge—and the examiner may be trusted to exercise discretion and forbearance when testing the qualifications of a candidate.

Secondly, a large section of pharmacists, even those who do not reside in the West-end, have gained a superior position to the vending of pennyworths; and, were that the average outcome of success, there would be no future applicants to whom the curriculum would apply. In olden time there was a custom, when things came to extremities, to select one champion from either side and let them fight it out. We would put these two speeches in opposition, and let them explain each other. One says the student has more than sufficient time on hand to learn his business and qualify for his examination; the other that life itself would be too short to satisfy the claims of the curriculum. This is the plus and minus of the argument, and leaves us where we were. The more the question is agitated the more we are persuaded of the wisdom of the Council arrangement of



the curriculum, and of its kind intention towards the young pharmacist.

The object of a master engaged in business is not to train a brilliant scholar, but to instruct a youth in the knowledge of his business, and to be benefited by his trade services. Within the walls of each pharmacy things are tight and habits are acquired which can be learnt and fixed nowhere else. The shop must not be confounded with the school. A perfect understanding of the whole range of science, including the use of the microscope, which Mr. Bland would throw in, never has made, and can never make, a business man. When he has learnt his trade, and gleaned a moderate stock of theory on the way, then let him have the same advantages as are presented in all other professional careers, and be set at liberty to enter untrammelled on the science and literature of his calling.

Else we shall have a race of indifferent tradesmen and superficial scholars. The founders of our Society succeeded in spite of their surroundings: now, on a broader and more liberal system, we want their successors to succeed by flowing out the lines wisely suggested for their guidance.

## The Pharmaceutical Council.

THE final meeting of the old Council was held on May 23 previous to the annual meeting. Messrs. Squire, Colley, and Young were the absent members.

### MR. PETER SQUIRE.

A portrait of Mr. Peter Squire had been presented to the Society by Mr. J. E. Mayall, and on the motion of the President a vote of thanks was passed to Mr. Mayall for it.

### THE PHARMACOPEIA.

The following memorandum was read, enclosed with a letter from Mr. W. J. C. Miller, the Registrar of the General Medical Council.

General Council of Medical Education and  
Registration of the United Kingdom,  
299 Oxford Street, London, W.  
May 18, 1883.

### Memorandum.

The General Medical Council, having decided on issuing a new edition of the British Pharmacopœia, have appointed a Committee to make the necessary arrangements for carrying this object into effect under the direction of the Council.

In the performance of this duty the Committee are desirous of enlisting the co-operation of the several medical and pharmaceutical authorities, and of such persons as may be able to furnish useful information, with the view of rendering the work as complete and accurate as possible. In furtherance of this object the Committee invite, and will be happy to receive such suggestions as may be made to them by the above-named authorities, and to give these suggestions their most attentive consideration.

(Signed) RICHARD QUAIN, M.D.

Chairman of the Pharmacopœia Committee.

To the President and Council of the Pharmaceutical Society of Great Britain.

The PRESIDENT stated that a similar application had been sent to him individually, and to many individual pharmacists and pharmaceutical associations.

The consideration of a reply to the circular was deferred. The following copy of a memorial to the Privy Council on the subject of Pharmacopœia revision was laid on the table.

*Memorial of the Council of the Pharmaceutical Society of Great Britain to Her Majesty's Privy Council.*

### MEDICAL ACTS AMENDMENT BILL.

The Council of the Pharmaceutical Society of Great Britain begs to call attention of the Privy Council to the provisions of this Act relating to preparation and revision of the British Pharmacopœia (clauses 30 to 35 of the Bill).

According to the provisions of the Bill, this work is to be published under the direction of the Medical Council.

For the purpose of compiling and revising the Pharmacopœia previous to its publication, it has always been found necessary to appoint a special Pharmacopœia Committee.

In this country, hitherto, that Committee has consisted solely of members of the Medical Council, assisted by professional experts, whereas in all other European countries, the constitution of that Committee is fixed by law, and in every case it includes a considerable number of pharmaceutical chemists. In the United States of America pharmaceutical chemists form a majority of the Committee of Revision.

The decision as to what drugs or medicines shall be introduced into or expunged from the Pharmacopœia rests with the medical members of the Committee, and the responsibility as to the working out of the chemistry and pharmacy of the preparations, and the manner in which they should be made, rests with the pharmaceutical members.

The Council of this Society considers that this or some such method should be followed in this country, and laid down in the Bill now in the House of Commons. It is supported in this view by many members of the medical profession and by the medical press generally. Moreover, inasmuch as by the Pharmacy Act, 1868, and the Sale of Food and Drugs Act, the Pharmacopœia is taken as the standard of purity and strength of such drugs and medicines as are contained therein, it seems desirable and equitable in the public interest that the practical experience of pharmaceutical chemists should be made available on the said Committee.

Since the time when the apothecaries commenced to practise medicine, pharmacy has been more and more neglected by medical practitioners and the medical licensing bodies; whereas the Pharmaceutical Society of Great Britain, since its incorporation by Royal Charter in 1843, has occupied the position abandoned by the apothecaries, and continuously directed its efforts to the improvement and extension of those special branches of knowledge on which pharmacy proper is based. In 1852, Parliament recognised the public utility of the Society's exertions by passing the Pharmacy Act, 1852, on the ground that it is expedient for the safety of the public that persons exercising the business or calling of pharmaceutical chemists should possess a competent practical knowledge of pharmaceutical and general chemistry and other branches of useful knowledge.

Since the value of the Pharmacopœia as a legal standard depends very much on the loyalty with which pharmaceutical chemists and druggists conform to its instructions, it seems politic to associate members of the pharmaceutical body with the representatives of the medical profession on the Committee.

The Council of the Pharmaceutical Society of Great Britain therefore ventures to suggest that a clause to the following effect be inserted in the Bill after Clause 63:—

"For the purpose of compiling the said Pharmacopœia there shall be established a Pharmacopœia Committee consisting of six medical practitioners, to be nominated by the Medical Council, and five pharmaceutical chemists, four to be nominated by the Council of the Pharmaceutical Society of Great Britain (one of the four to be resident in Scotland) and one by the Council of the Pharmaceutical Society of Ireland."

The new Council met for the first time on June 6; Mr. Gostling only was absent. Mr. M. Carteighe was re-elected President, Mr. S. R. Atkins Vice-President, and Mr. J. Robbins Treasurer. The official staff of the Society were also re-appointed, and the Council committees were also readjusted.

Among formal business the following names were restored to the Register:—

William George Clapperton, 610 Myrtle Avenue, Brooklyn, U.S.A.  
John Henry Hateley, 4 Shawclough, Rochdale.

And the following were added to the Register:—

David Fairbrother, 2 Flitcroft Street, Manchester.  
Joseph Woods, Tunstall, Staffs.  
Sarah Craig, Howgate, Kilwinning, Ayrshire.

The library and museum report was read.

### THE PHARMACOPEIA.

This subject was referred to in the above report.

The President, in pursuance of a resolution of the Council, had sent a letter to Mr. Mundella on the subject of the Medical Acts Amendment Bill, with special reference to the Pharmacopœia, in which he had asked if Mr. Mundella would receive a deputation on the subject. Mr. Mundella had replied, saying that, as it was not proposed to alter the Bill, he did not think it worth while for a deputation to attend, but he should be happy to see the President after the Whitsuntide holidays. The Committee had thereupon desired the President and Mr. Hampden to arrange for an interview, and if they thought it expedient to issue to Local Secretaries and others circulars and forms of petition to the House of Commons.

The Committee had also considered the form of amendment to the Medical Bill, which it was desirable should be proposed in the House of Commons.

The Council went into Committee and discussed the action to be taken with regard to the Medical Acts Amendment Bill.

Subsequently the Council again went into Committee to consider the letter from Mr. Miller referred to above, and after a long discussion resolved to acknowledge receipt of the communication, and to state that it had been submitted to the Council.

#### FREEHOLD INVESTMENTS.

The Council considered a proposal in regard to these in Committee.

#### BENEVOLENT FUND.

A grant of 10*l.* was made to the widow of a registered chemist who had been in business twenty-three years.

### Pharmaceutical Society of Ireland.

THE monthly meeting of the Council of this Society was held on June 6 at Dublin, the PRESIDENT (Dr. Tichenborne) in the chair. The other members of the Council present were the Vice-President (Dr. Aquilla Smith), and Messrs. Allen, Brunker, Doran (Bray), Draper, Grindley, Hayes, Hodgson, McIlwaine (Newry), Simpson, and Wells.

A letter from Mr. W. J. C. Miller, Registrar of the General Medical Council, enclosed a printed circular from Dr. Quain, Chairman of the Pharmacopœia Committee of that Council, stating that they were very desirous of enlisting the co-operation of the several medical and pharmaceutical authorities in the bringing out of the new Pharmacopœia, and inviting suggestions with that view, which, it was stated, would receive their most attentive consideration.

Mr. DRAPER said the office of making suggestions was a very thankless one.

PRESIDENT: I think it would be courteous to reply to the letter.

Mr. BRUNCKER: I think it would be well to appoint a committee on the subject, who could report to the Council.

VICE-PRESIDENT: The book will not be published for two years.

Mr. HODGSON: How did the Pharmaceutical Society of England take it up?

PRESIDENT: We would be rather stultifying ourselves if we took any action on this letter when we are memorialising the Government to give us representation on the Medical Council.

Mr. HODGSON: I do not see how we can give suggestions to a committee on which we are not represented and of which we think we ought to be a component part.

The PRESIDENT: I would suggest that for the present Mr. Fennell be directed to acknowledge the receipt of this letter. We can take up the matter afterwards if necessary.

An order was made accordingly.

The PRESIDENT submitted a correspondence with Mr. Carteighe, President of the Pharmaceutical Society of Great Britain, showing the action which that society have taken for the purpose of obtaining the insertion in the Medical Acts Amendment Bill of a clause providing that pharmaceutical societies shall be represented on the committee intended to be established under the Bill for the revision of the Pharmacopœia. The correspondence included copies of the memorial and petition which the English Society have adopted on the subject. They (the Council) had already discussed this point about the representation, and the English Society were pressing on. It was requested, however, that no petition should be sent in until the Bill went into committee. But there was another point which the English Society did not seem to have taken cognisance of. One of the clauses of the Medical Bill provided that the "general medical practitioner" who had passed the State examination should have a right to compound prescriptions. As the law previously stood they were only given the right to compound prescriptions for their own patients. When the Bill in question was in the House of Lords an alteration

was made in the clause in question, apparently advisedly, the effect of which would be to give every man who should have passed the State examination the power of compounding for the public. The Apothecaries' Hall had already petitioned against this, and he (the President) thought it was the duty of the Pharmaceutical Society also to petition against it.

Mr. BRUNCKER: It does not affect the English Society so much as it affects us.

PRESIDENT: It does, because, if the clause as it stands becomes law, surgeons may not only compound for themselves, but also for the public. I think a committee should be appointed to report on the two matters. It should be done at once. The clause should be altered by the introduction of the words "for their own patients."

Mr. DRAPER: I think it is a very important point.

On the motion of the PRESIDENT, seconded by Mr. ALLEN, a committee, consisting of Mr. Draper, Mr. Hayes, and the mover and seconder, were appointed to draw up a petition to the House of Commons praying for amendments in the Medical Acts Amendment Bill in reference to the revision of the Pharmacopœia and the open dispensing for the public by general practitioners.

As it was necessary to take action in the matter before the expiration of a month the President and Vice-President were empowered to affix the seal of the Society to whatever petition the committee drafted.

A letter was read from Dr. J. W. Moore, Registrar of the College of Physicians, stating that as that body were pressed for library space they were anxious to resume possession of the room rented by the Society, but they wished to afford the Pharmaceutical Society ample time to make the arrangements consequent on their surrender of the room. A discussion ensued, in the course of which Mr. HODGSON suggested that debenture stock might be issued to raise funds for building a house for the Society. The consideration of the matter was referred to a committee.

Mr. Henry Webb, of Kanturk, wrote complaining that a person who was neither an apothecary nor a pharmaceutical chemist had opened a shop and was compounding prescriptions in that town.

Mr. HODGSON: Mr. Webb is not a member of the Pharmaceutical Society.

The Registrar was directed to inform Mr. Webb that as he was not a pharmaceutical chemist the Society could not entertain his letter.

Other correspondence was submitted. A question of general interest was asked by Mr. S. CURHAM, who stated that Mr. Hardy, who was a partner of Mr. Beater, of Sackville Street, and who passed the pharmaceutical examination some time ago, had by agreement with the firm opened on his own account and responsibility a compounding department in the premises of the said Beater & Co. Would an apprenticeship served to him and his certificate thereof be accepted by the Council?

After some discussion—

Mr. HODGSON moved the following resolution:—

That, having refused a similar application, and, as an appeal has been carried to the Privy Council, we await the result of that appeal before giving Mr. Curham a decided answer.

Mr. BRUNCKER seconded the resolution, which was passed unanimously.

The PRESIDENT gave the following notice of motion:—

That on and after October 1, 1883, the office of President of the Society shall not be held for more than three consecutive years by the same person.

A letter was received from Mr. Thomas S. Hance, of Limerick, in reference to the refusal of the Council to accept certificates given by him on the ground of his not keeping an open shop. He maintained that he did keep an open shop for the compounding of medical prescriptions and the preparation of medicine in general. The Local Government Board had sanctioned his taking pupils in pharmacy, under prescribed rules, a copy of which he enclosed. He had been giving certificates for four years, and these had never been questioned by any other Medical Board in the three kingdoms. Between 40,000 and 50,000 prescriptions, he said, were prepared annually under his personal superintendence, and he submitted that the Act of Parliament did



not mean that because a qualified man kept an open shop within certain gates, and did not receive money over the counter, he was not to have his legal rights.

Mr. BRUNKER: I think we are right in our decision. He does not keep an open shop. He keeps the dispensary of the workhouse.

Mr. WELLS: If he only has a shop within the workhouse walls it is not an open shop.

The consideration of the letter was postponed in order that inquiries might be made.

Mr. HODGSON (on behalf of an apprentice) submitted the question whether the certificate of a qualified chemist acting for the executors of a deceased chemist, be accepted for the major examination?

Mr. BRUNKER: As a matter of fact such certificates have been recognised and have never been questioned.

Mr. HAYES: If the establishment is kept open regularly, and according to the requirements of the Act, I don't see how we can refuse the certificate. I think you may definitely answer that the certificate will be accepted.

The Council then adjourned.

## The Chemists and Druggists' Trade Association.

THE annual meetings of this Association were held at the Inns of Court Hotel on May 22. The General Committee met first at 11 A.M., Mr. R. Hampson presiding. The report having been submitted, a general conversation ensued as to the ways and means of improving the financial position of the Association. Mr. PARKER (Nottingham) suggested that meetings of the trade should be held in different towns. Mr. WILLIAMS (Manchester) thought the subscription might not be fixed at 5s., leaving those who pleased to give more. Mr. SYMES (Liverpool) suggested an idea that possibly an insurance fund might be created, people paying, say, five guineas a year to be entitled to defence by the Society. Mr. MASON (Liverpool) doubted whether it was advisable to always hold the annual meeting in London, at any rate he suggested that a meeting might be held this year at Southport, when the Conference should be there. These suggestions were criticised by other speakers, and no definite proposal was agreed to. The Committee balloted for a list of names to submit to the General Meeting for an executive committee.

### THE GENERAL MEETING.

At 12 noon the General Meeting of the Association was held. The total attendance only reached forty-six.

Mr. HARRISON (vice-president) in moving the adoption of the report, made a vigorous attack on the Clause of the Pharmacy Bill creating a schedule of poisonous articles. He urged that it was one thing to accept such a proposal if the Government should make it, and quite another to propose it. He also mentioned that the Association were trying to get the Inland Revenue Board to consent that when methylated spirit was bought for the purpose of analysis, a sample should be left with the vendor in a way similar to that adopted under the Sale of Food and Drugs Act.

Mr. GREEN (Woolwich) seconded the motion.

Mr. WILKINSON (Manchester) thought it was a mistake for the Pharmaceutical Council to suggest the schedule of poisonous articles. He did not see much grievance in respect to methylated spirit, as any chemist could make himself quite safe by taking out a 10s. licence to sell methylated spirit. As to the poisonous patent medicines, he wanted to know whether, if they made a cough medicine containing five or six drops of laudanum in a dose, they would have to label that "Poison."

The PRESIDENT intimated that that would not be requisite.

Mr. WILKINSON said, if not, where would the line be drawn? They must be careful not to tie their own hands.

Mr. SYMES, in defending the Pharmacy Bill, said the Government wanted a Poisons Act while they wanted a Pharmacy Act, and this must be regarded as a compromise.

Mr. CANDY said the Pharmaceutical Council did not act

in the interests of the trade, and to some extent they were justified. He wanted to see the ninth clause passed, but Parliament would never pass it: they were too much interested in co-operative stores. They did not want the trade in such dirty things as vitriol and nitric acid; they wanted more monopoly in the sale of medicines. As for the sale of poisonous patent medicines, he maintained that the proprietor, and not the vendor, ought to be responsible. He concluded by remarking that many members hardly cared to subscribe to this Society, as it was becoming very much of a double of the Pharmaceutical Society, though he believed there was a sphere for both.

Mr. MACKENZIE (Edinburgh) objected to several features of the Bill, especially the proposal to prosecute vendors instead of makers of poisonous patent medicines not properly labelled, and also to the apprentice clause. He did not believe, however, the Bill had much chance of passing, so they need not trouble much about it.

Mr. LONG asked how the "vital interests" of chemists and druggists were likely to be cared for if the chemists and druggists of Great Britain were represented by such a meeting as that one. He thought the time had come when they might think a little of their own rights as well as of the public advantage.

Mr. ALLEN (Kilburn) urged that cohesion was wanted, and that they should sink their differences and support the Bill.

Mr. WHITTLE also urged unanimity.

Mr. BARCLAY commented on the importance of this Association to look after the trade side of the business. He was surprised that no one had mentioned the jury question, and he thought the differences of opinion respecting the Pharmacy Bill showed the desirability of a conference between representatives of the Pharmaceutical Council and of the Trade Association. As to the methylated spirit question he mentioned cases of apparent injustice, and said that many chemists did not sell enough methylated spirit to make it worth a licence of 10s. a year.

The PRESIDENT, before putting the motion, defended the Bill, as in the Pharmaceutical Council he had taken the responsibility of moving its acceptance. He had served on committees which had gone into details of the measure, and had looked all round the subject, and considered it was an excellent Bill. With regard to the poisonous schedule, he said the Government were likely to bring in a measure if they did not, and the Council thought it extremely desirable that any interference with the sale of poisons should be included in the Bill, although the method proposed might not be exactly the method they liked. Their only chance of getting legislation at all was to be thoroughly united. He thought it desirable that the Executive should have a conference with the Pharmaceutical Council, and if possible come to an amicable and substantial agreement.

The motion for the adoption of the report was then carried unanimously.

The following names, recommended by the General Committee, were then agreed to as the Executive Committee for the ensuing year:—

Andrews, Frederick, London  
Arbaster, C. J., Birmingham  
Barclay, Thomas, Birmingham  
Barbary, Henry, Rochester  
Bell, C. B., Hull  
Chapman, Henry, Scarborough  
Chenrill, W. J., Birmingham  
Cross, W. G., Shrewsbury  
Eldinor, G., Sheffield  
Hampson, Robert, London  
Harrison, John, Sunderland

Holdsworth, T. W., Birmingham  
Jervis, W., Sheffield  
Jones, O., Llanwrst  
Maltby, J., Lincoln  
Mason, A. H., Liverpool  
Parker, W. H., Nottingham  
Southall, William, Birmingham  
Symes, Charles, Liverpool  
Walker, G., Coventry  
Williams, F. P., Manchester  
Yewdall, E., Leeds

For Scotland:—Messrs. G. H. Laird, Edinburgh; James Mackenzie, Edinburgh, and James Paterson, Aberdeen.

Out of these the following were elected officers:—

Mr. Harrison (Sunderland) President, Mr. Cross (Shrewsbury) Vice-President, Mr. Southall (Birmingham) Treasurer, and Mr. Churchill (Birmingham) Hon. Secretary.

Mr. BELL moved—

That as it is not desirable that chemists and druggists generally should be united in support of the Pharmacy Bill, it be an instruction to the naming Executive to arrange an interview with the Pharmaceutical Council to promote that object.

Mr. WILLIAMS (Manchester) seconded the resolution, which was carried unanimously.



Mr. MACKENZIE then moved—

That a memorial be presented to the House of Commons in support of the claims of pharmacists to be associated with members of the medical profession in a legally constituted committee for the purpose of preparing the British Pharmacopœia, and that the Executive Committee be requested to take the requisite steps to obtain an amendment in the Medical Bill now before Parliament in furtherance of their claims.

Some discussion followed on this topic, resulting in some verbal alterations of the resolution, which was carried.

Short speeches from the new President and Vice-President, acknowledging the honour conferred upon them, and from Mr. Hampson, in reply to a vote of thanks for his services followed.

Mr. WILSON (Grimsby) raised the question of prescribing by chemists, and asked if the Medical Bill interfered with that, but it was stated that no alteration was made in the law.

## The Annual Meeting of the Pharmaceutical Society.

THE forty-second anniversary of the Pharmaceutical Society was held at 17 Bloomsbury Square on May 23 at noon. The members in attendance were considerably fewer than the average of the past few years, a fact possibly explained by the circumstance of a rival attraction on Epsom Downs the same day. The President, Mr. Carteighe, in opening the business, suggested the temptation to members to run through the business of the meeting quickly, so that those who desired it might get to the race-course in time to see the Derby; but these well-intentioned tactics were doomed to failure. There were notes of speeches in those buttoned-up pockets in front of the Chairman which would have had to be delivered even if the battle of Waterloo had been proceeding in the next parish; and those members of the Council who had reckoned so hopefully on their afternoon's holiday in Surrey found themselves chained to virtue's path by the sterner seriousness of their constituents.

With a view of saving time some slight innovations were introduced. The report having been taken as read, the President moved, and the Vice-President seconded, its adoption, instead of committing those duties to a couple of gentlemen whom it might seem desirable to humour or conciliate, as has sometimes happened. The President went through the sections of the report, commenting on a few of the subjects alluded to. The proposal to invest a portion of the funds of the Society in freehold-ground rents would bring in, he estimated, 4 instead of 3 per cent., which was what they now obtained from the Government funds, and it might be hoped that in something like sixty or seventy years, if the property was well chosen, the Pharmaceutical Society would be in such a position as to be able to do without any subscriptions from its members. One reason why a corporate body could thus invest their funds better than individuals could do so was that the Corporations did not die and leave difficulties for trustees to deal with. After some allusion to the examinations and a mention of the time devoted by the Council to the consideration of alleged infringements of the Pharmacy Act, Mr. Carteighe passed on to the new Bill. He suggested that the discussion of that subject generally should be taken on Mr. Sandford's motion; but he made a few remarks with the object of defending the much-criticised action of the Council in regard to the schedule of poisonous articles. The members must remember that the Bill, as drafted, was intended to be introduced as a Government measure; it was not, therefore, in all respects what they would have preferred to suggest. The President did not say directly that the Government had required the introduction of the poisonous clause; nor did he make clear why the Council had thought proper to introduce it. A declaration of the rights of pharmacists as to the preparation of the Pharmacopœia elicited general applause; and on this question Mr. Carteighe said he thought it would be best to avoid reference to individuals and confine their attention to the

public claim. Referring to the Benevolent Fund he said the great majority of applications for relief came from registered chemists who had never been connected with the Society. The fund was truly catholic, and he trusted, therefore, they might continue to urge its claims on the whole trade. The President concluded by remarking that if they only mentioned in the final paragraph of the report the names of those members removed by death during the year who had held an official position, it was not that they less appreciated the work done for pharmacy by many others in nooks and corners of the country.

Mr. ATKINS (Vice-President) formally seconded the motion, reserving any remarks he might wish to make till afterwards.

Mr. VIZER, of Brighton, having given notice of an amendment to the motion, had the right to speak next. He desired to alter the recommendations as to the division of the Minor examination by allowing students to pass the first portion after two instead of three years' employment in a shop, and by allowing the second portion to be passed after six months instead of after one year. He also proposed to so alter the syllabus of the curriculum that a student might pursue the necessary studies in the course of his three years' apprenticeship if he so desired. Mr. Vizer advocated this alteration with some force at considerable length. He urged that some young men with exceptional opportunities, or of exceptional abilities, would be unnecessarily kept back, and he also showed that to require a year of special study after the three years' apprenticeship was a method of ensuring cram during that year, by putting off the necessary studies until that period. Nearly all Mr. Vizer's arguments were arguments against the curriculum in any form, and the meeting did not seem inclined to go on that well-beaten track again. For some moments a hope was entertained by the sporting section that the amendment would fall through for want of a seconder, but after a little hesitation Mr. Christopher Wheeler came to the rescue, and put the discussion on its legs.

Mr. WHITTLE said Mr. Vizer had not convinced him, and Mr. ALLEN argued that the tendency during recent years had been to reduce the term of apprenticeship, and, if Mr. Vizer's motion were carried, apprenticeship might become only an affair of two years.

Mr. VIZER protested against being understood as advocating a two years' apprenticeship, but other speakers adopted that tangible question as the point at issue, and Mr. URWICK and Mr. RIMMINGTON both pointed out how superior were the men of a former generation who had served longer periods of apprenticeship to those of modern days, while Mr. MARTINDALE remarked that there could not be any great hardship in the recommendation as it stood, inasmuch as the second portion of the examination could not be passed until the candidate was twenty-one.

Mr. BLAND next rose and smilingly informed the meeting that a crisis had arrived in their history imperilling the interests of all pharmacists, and threatening ruin and disaster to the Society. With this alarming exordium Mr. Bland proceeded to comment in a humorous style on various topics not very closely related to themselves, and none of them connected with the amendment. The Society had miserably failed to give them protection, and if it had given them legal status he did not know what that meant. Historic houses had taken up the weapons of Professor Holloway and Professor Chlorodyne Browne, and the public did not care a button about the meaning of the title "pharmaceutical chemist." He maintained that the poisons regulations could not be carried out literally. He frequently sold cyanide of potassium to boys sent from a large firm in his neighbourhood, and the boys signed his poison register; but the boys were not legally the "purchasers." The Pharmacy Act restricted them in all sorts of ways, but allowed interlopers to filch away 90 per cent. of their trade. On the Pharmacopœia question he recommended pharmacists to stand aloof if they were not granted their rightful position on the Pharmacopœia Committee, and see what sort of a book the medical men would make by themselves. He did not approve of the curriculum, and was sarcastic on the extent of knowledge which was required of young men who, when they had acquired it and passed their examinations, would have the splendid reward of being permitted to sell one pennyworth of poison and do sixpennyworth of writing about it. He wanted to know what became of the young



men trained in their laboratories, and, finally, regardless of the comments he had just made on the extent of the syllabus of the curriculum, he objected to it because the microscope had not been included. Mr. Bland's speech was received with a good deal of merriment, and the many grievances touched upon were very sympathetically endorsed by the audience.

Mr. GILES undertook to reply to the last speaker. In the first place he emphatically denied that the protection of the trade was one of the prominent objects of the institution of the Pharmaceutical Society. The founders had been brought together in defence of their interests, but their main object in this association was to elevate pharmacy. The legal status attained was of immense importance. It was that, for instance, which enabled them to claim the right to share in the compilation of a national Pharmacopœia. On this subject, Mr. Giles discoursed historically, and, as usual, dictatorially. There was no rational answer to the claim which he endorsed. Why then was it not granted? Going back to 1809, the pharmacists of the day, that is to say, the apothecaries, were associated with the physicians in the compilation of the Pharmacopœia. The apothecaries had since abandoned pharmacy, but the pharmacists of the present day had not been admitted to occupy the place which the apothecaries held in 1809. In 1858, when the Medical Council was formed, the pharmaceutical body had not been legally incorporated very long, and perhaps it was not surprising that they had not been then authorised to take part in framing the Pharmacopœia. But he held that the Council would have unpardonably failed in their duty if they had not pressed their claim on this occasion. The Pharmacopœia was a pharmaceutical laboratory-book, and it was absurd to commit its compilation to men who had no special knowledge of pharmacy. He traced the present state of things to the fact which he asserted, that the calibre of the Council had deteriorated. He did not wish to offend any member of the Council, but he believed they had not shown on the Council such men as he remembered—such men as Bell, Deane, Morson, Savory, Squire, Hanbury, and others. He urged that some members of the Council should retire in favour of eligible successors, and he believed such could be found. Mr. Giles went on to comment on the great increase of the travelling expenses incurred by members of the Council, on the tendency of the system of reporting to lead members of the Council to address speeches to the constituency, and finally he commented in strong terms on the discourtesy shown by the Medical Council in their treatment of a letter sent them some time ago by the Pharmaceutical Council urging the claim of the latter body to be represented on the Pharmacopœia Committee. The receipt of that letter was acknowledged, and no further notice was taken of it.

Mr. FRAZER, in opposition to Mr. Giles, expressed the opinion that pharmacists had no legal claim to be represented on the Pharmacopœia Committee. He regarded the Pharmacopœia as the medical man's prescription-book, and not, as Mr. Giles said, as a laboratory formula-book. From this point of view he urged that medical men were within their right in claiming the exclusive prerogative of saying what that book should contain, though it was a question whether their assertion of that right was good policy. He raised the question whether the apothecaries in 1809 were pharmacists simply, or whether they were not then, as now, entitled to practise as medical men. Mr. GILES rose to proceed with the discussion of this new point, but no one seemed quite certain of his facts, and happily the historical problem was not further pursued.

Mr. LONG followed with a characteristic speech, telling the members that it was of no use to find fault with the Council; the Council were what the Society made them. They could not go to Westminster and pass any measure they thought best, but still they ought to look after their own interests.

Mr. HAMPSON, referring to Mr. Giles's attack on the Council, said he was quite ready to surrender his seat to Mr. Giles or to anyone who would better occupy it, but he regarded as very bad advice his suggestion to make a ho-and-corner business of the election of the Council. As to the Pharmacopœia, he urged all chemists to use their influence with their members of Parliament to get their just rights recognised.

Mr. MACKENZIE (Edinburgh) also condemned the attack on the Council, and was followed by Mr. PATERSON (Aberdeen), whose special sorrow was the proposal that no apprentice should be taken until he had passed the Preliminary examination. He did not think they need put difficulties in the way of errand boys becoming pharmacists, and he declared that he preferred lads from the country who had not had a classical education. The new regulations, he said, were regarded in Scotland as a scheme for getting cheap assistants to London, but this interesting and novel theory he did not stay to develop. He would move an amendment to the report to the effect that no change in regard to education should be made at present.

The PRESIDENT said Mr. Vizer's amendment must be disposed of first.

Mr. LOMAS objected to Mr. Paterson's views about apprentices, Mr. BROAD (Hornsey) said Mr. Paterson's ideas were illogical; he did not agree with Mr. Frazer's opinion about the Pharmacopœia, because it was the pharmacist who had to say how preparations were to be made; and he supported Mr. Giles's ideas concerning the Council. Mr. CROSS (Shrewsbury) asked if forty years of education had made them less fit to select good men for the Council, and remarked that it was likely to be good for pharmacy that the country should influence London.

Mr. ELLINOR (Sheffield) discussed the Pharmacopœia question, and announced that he intended to see Mr. Mundella on the subject before he went back.

Mr. HOWARD HALL went through the financial statement, giving the result of some calculations he had made, comparing this with previous statements. Respecting one or two points, which he thought were not quite clear, the President said this was not a balance sheet, but a financial statement, and, consequently, some payments might appear in this which strictly belonged to the previous year.

Mr. SANDFORD and Mr. STACEY both expressed disapproval of the proposal to invest some of the Society's funds in ground rents, which, Mr. Sandford said, would necessitate a staff of collectors, clerks, and decorators, and in the end would probably yield no more profit than was obtained at present.

Mr. HUMPAGE thought this was a question which might be left to the Council; and, in reference to Mr. Vizer's remarks that the new regulations might check the progress of young men of genius, he said he had never known a case of a young man who had gone into business for himself at an early age and had not regretted afterwards that he had not had more experience.

Mr. RICHARDSON returned to the remarks of Mr. Giles touching the Council, and was interrupted by that gentleman, who wished to explain his speech, though in what point he had been misunderstood did not seem obvious.

The VICE-PRESIDENT (Mr. Atkins) then wound up this part of the proceedings in a very eloquent speech, in which he effectively but good-humouredly replied to Mr. Giles's ungenerous attack. He was a country member, and as such perhaps it was hardly in place for him to answer what had been said; he was one who had his travelling expenses paid, though he was not aware that his hotel bill was paid also; but he was recognised as one of the unknown ones, and he might as such take on himself to answer some of Mr. Giles's criticisms. He did not question the virtues of those dead lions of the past who had been referred to, but he could point to his chief (the President) and declare that for a good all-round man, capable of representing the Society anywhere, he would compare with any of them. He also directly opposed Mr. Giles's contention that the Pharmaceutical Society did not at the formation contemplate the protection of the trade. The three objects enumerated in the charter were education, protection, and benevolence. Mr. Atkins took the orthodox view in regard to the Pharmacopœia, and repeated the argument that the curriculum was intended to facilitate the progress of duly-qualified young men, and to prevent the deplorable waste of valuable time on the part of those who began the business but failed to qualify themselves.

The President took advantage of the momentary lull which followed Mr. Atkins's speech to put Mr. Vizer's amendment, which was promptly negatived, the mover and seconder being apparently the only supporters.

Mr. PATERSON then came forward with an amendment to



the effect "that no change in the examinations be made at present." In advocating this amendment he urged that the Society ought to do more for provincial education, and he especially urged the plan which had been suggested, that young men who had completed their studies should go into the country and give lectures; but he did not mention that the plan was first proposed in *THE CHEMIST AND DRUGGIST*.

Mr. CANDY (Wantage) seconded this amendment, but declined to speak to it, as he said the members were not willing to listen to arguments which they did not agree with—a somewhat ungracious remark, considering that most of them must have been thus engaged a good part of the morning.

This amendment being put and lost, the Pharmacy Acts Amendment Bill came forward for discussion, and this being a somewhat more tangible topic the proceedings became considerably more animated.

Mr. SANDFORD moved—

That in the opinion of this meeting certain provisions set forth in the proposed Bill to regulate the Sale of Poisons and alter and amend the Pharmacy Acts require alteration, especially Clauses 4 and 5, which render retail vendors of patent or proprietary medicines who have not and cannot have any control over the required labelling of such medicines liable to prosecution for insufficient labelling, for which offence the proprietors only should be and can be made responsible.

Mr. Sandford's arguments were that it would be unjust to fine a man for selling a patent medicine not properly labelled, as he could not tell whether it was labelled poison without breaking the seal, and thereby rendering the article unsaleable. The case was not parallel with the sale of jalap or mustard. A man who sold jalap or mustard could see what he was selling, and was supposed to understand the nature of the article; the seller of the patent medicine was in the position of a postman delivering a letter. He maintained it would be quite easy to get at the proprietor of any patent medicine. If he could not be got at in the first instance, what was the use of the clause enabling the seller to get re-imbursed? He would enact that every proprietor who should make a patent medicine containing poison should be required to label it "poison," and in the case of foreign patent medicines he would require the importer to take the responsibility. Mr. Sandford further pointed out the anomaly in the Bill that for a first offence a seller was to be fined 5*l*., for a second offence 10*l*., and was to be allowed to recover the penalty from the dealer who had supplied him with the preparation. Would he have the right to recover 10*l*. in the second instance?

Mr. URWICK seconded the motion, and Mr. MACKENZIE supported it.

The PRESIDENT then made a speech in reply. He admitted that the cumulative penalty created a difficulty, but that could easily be struck out, and did not affect the chief question. The trade and other bodies had desired the Council to provide that the sale of poisonous patent medicines should be restricted. It might or might not be to the interests of the trade that such restrictions should be enacted, but he thought on that point chemists had made up their minds. If they were to make restrictions, they must make them in such a way that the Act would work. Were chemists to have the sole right of selling such articles, and to have no responsibility? What would be done suppose Mr. Sandford should retire to Boulogne, and by the aid of an assistant at Folkestone inundate the country with poisonous patent medicines? He would be the proprietor, but no one could get at him, because he was outside the jurisdiction. No doubt it seemed hard that the mere sellers of a patent medicine should be fined, but he thought it was desirable that the pharmacists should be required to exercise judgment in the sale of patent medicines. They did not wish to multiply law suits, but they were advised that their plan was the only one which would meet the difficulties. It was on that principle that the patent laws were worked; the person who sold the article which infringed the patent was liable. The Council were not likely to tie the hands of the trade for a mere whim. The practical working of the clauses would be that no wholesale house would take up the sale of patent medicines without satisfying themselves that the articles were properly labelled.

A general running conversation followed, and the "evident sense" of the meeting seemed to tend strongly

towards Mr. Sandford's views. That gentleman having briefly replied, the President was about to put the motion when Mr. Hampson interposed with an amendment referring the question to the new Council for reconsideration. Mr. Sandford thought it unfair to move an amendment after he had replied, and remarked that the new Council would be practically the old one again, and he objected to leave the subject with them without a strong expression of opinion. The amendment was put to the meeting and was lost by 49 votes to 46, and Mr. Sandford's resolution was carried.

After this victory Mr. SANDFORD proceeded to point out other defects in the Bill, especially urging that when a chemist had more than one shop he should be required to have a qualified assistant in each, and not in the branch shop only, as it would be difficult sometimes to tell which was the parent shop and which the branch. He also wanted a clause which would justify a chemist in refusing to supply a stranger with strong poison, even though he should profess to be a medical man. On this point Mr. MARTINDALE made the happy remark that prescribers ought to be required to write their prescriptions on printed forms, giving their name and address. Considerations of public safety should override medical etiquette.

But Mr. SCHACHT had been wondering what was to be done about the resolution which had just been carried. What if the Council found they could not carry out the instructions given them—a result which was evidently, in Mr. Schacht's view, the most probable one? He ingeniously suggested that a small committee should be appointed to confer with the Council as to the best way to execute the will of the meeting.

Mr. SANDFORD resisted this method of reopening the question, and the President, though he admitted Mr. Schacht's right to move the appointment of a committee, seemed to appreciate the *arrière pensée* of the motion, and asked him to withdraw it; but Mr. Schacht, receiving some support from several gentlemen, said he would press it, and Messrs. Sandford, Umzey, and Martindale were named. Mr. Sandford flatly refused to serve on any such committee, and Mr. Stacey intimated that the Council would be expected to carry out the resolution which had been passed. Mr. Hampson asked what was to be done if, after taking counsel's opinion, they found that Mr. Sandford's object could not be framed into a clause. To which Mr. Sandford answered he should laugh at such a counsel's opinion. The motion for a committee with Mr. Sandford refusing to serve on it was evidently hollow, and being formally put was promptly negatived.

After some formal business had been hurried through the meeting was adjourned till Friday, May 25, when the report of the scrutineers was received. It appeared that 3,662 voting-papers had been issued, of which 1,370 had been returned, leaving 2,292 which had not been sent in. Of the 1,370, 65 were informal or received too late, leaving 1,305 votes actually recorded. The result of the poll was as follows:—

Bottle .. .. .	1,199	Radley .. .. .	1,077
Symes .. .. .	1,193	Butt .. .. .	1,053
Hampson .. .. .	1,184	Richardson .. .. .	1,036
Atkins .. .. .	1,178	Andrews .. .. .	1,116
Savage .. .. .	1,174	Borland .. .. .	965
Woolley .. .. .	1,137		
Cartledge .. .. .	1,130		
Hills .. .. .	1,103	Ballock .. .. .	689
Robbins .. .. .	1,103	Young .. .. .	630

The Council for 1883-4 is therefore identical in personal constitution with its predecessor.

THE Colonial Secretary of New Zealand has been instructed to offer the following bonuses for the encouragement of new local industries:—50 per cent. on the value realised for the first 1,000*l*. worth of cocoons or silkworms' eggs produced in the colony, to be paid on quantities of not less than 50*l*. worth, or more than 100*l*. worth, reared by any one person; 500*l*. for the first 2,500*l*. worth of native manganese and bronze; 300*l*. for the first 1,500*l*. worth of native marble sold in a foreign market for not less than 9*s*. per cubic foot; 500*l*. for the first 250 tons of native antimony regulus sold in a foreign country at a fair market value; and 1,000*l*. for the production, from native ores by a direct process within the colony, of 200 tons of "iron blooms" of marketable quality.



# THE ANNUAL DINNER OF THE PHARMACEUTICAL SOCIETY.

THIS pleasant annual festivity was held for the twelfth time on May 22, Willis's Rooms being chosen as the locale. Rather more than 200 gentlemen were present, and among them an unusually distinguished array of guests. These included the Right Hon. the Lord Mayor of London, Mr. Alderman and Sheriff De Keyser, Mr. Sheriff Savory, Dr. Farquharson, M.P., W. McCullagh Torrens, Esq., M.P., Sir F. Abel (President of the Society of Chemical Industry), Sir Joseph Fayrer (President of the Medical Society), Dr. T. Bridgewater (President of the Metropolitan Branch of the British Medical Association), Dr. Andrew Clark (President of the Clinical Society), Dr. Gervis (President of the Obstetrical Society), Dr. Walker (President of the Odontological Society), Dr. E. Symes Thompson (President of the Harveian Society), Professor Odling (President of the Institute of Chemistry), the Master of the Society of Apothecaries, Professor Allman, W. T. Thiselton Dyer, Esq., Dr. Langdon Down, Wyndham Cottle, Esq., and Dr. T. Stretch Dowse.

Mr. Carteighe presided, with the Lord Mayor on his right and Sir Joseph Fayrer on his left. Some pharmacists, accustomed to 30s. dinners, seemed a little dissatisfied with the guinea article, which was what was provided on this occasion, but journalists, who do not fare sumptuously every day, found nothing to complain of. A programme of speeches and songs was placed before the company, and as the latter were all performed by masculine professionals their efforts were but little regarded, and only about half their proposed performance was got through. Mr. Carteighe in proposing the toasts was brisk and brief, and the other speeches were above the average of after-dinner orations in interest and fluency.

Mr. McCullagh Torrens was the first stranger to be called upon, and his duty was to reply for the Houses of Parliament. Mr. Torrens indicated the depth of his statesmanship by committing himself unreservedly to the pharmaceutical side of the Pharmacopoeia controversy, his remarks in the subject suggesting forcibly a previous "crum." It was noticeable that this well-intentioned method of drawing medical opinion entirely failed, as none of the professional speakers ventured on the dangerous topic.

The PRESIDENT next toasted the "Lord Mayor, the Sheriffs, and the Corporation of London," and skilfully credited them with all the beauties and blessings of Burnham Beeches, Epping Forest, and Coudson Common. The LORD MAYOR made a good-humoured speech in reply, intimating that he could spare his audience any dissertation on drugs or surgery, it claiming for the City the honour of having originated the Pharmaceutical Society, *via* the Society of Apothecaries. That to the City belongs all the glory of Epping Forest is now an established Guildhall tradition, and the Lord Mayor accepted all compliments in this respect, quite seriously assuring his audience that posterity might be expected to recognise their efforts with becoming gratitude even if their contemporaries did not sufficiently recognise them. Mr. Sheriff SAVORY also responded.

Mr. ATKINS proposed the "Learned and Scientific Societies," and claimed for pharmacists that they helped to provide a congenial soil wherein the discoveries of scientific men could take root. It was chiefly in this respect, in finding a quick response to their ideas, that the science of the present day differed from that of the past.

Dr. ODLING replied, and pointed out that if pharmacy was a declining profession there was an excellent opening for pharmacists to combine professional chemical work with their occupation.

The PRESIDENT proposed the Medical Profession, and told his hearers that, hard worked and poorly paid as they were, the medical profession had a claim to priority in this respect. To this toast Sir JOSEPH FAYRER briefly replied, and then Dr. FARQUHARSON, M.P., in a very complimentary speech, proposed "Prosperity to the Pharmaceutical Society" and the health of the Chairman. He claimed to speak as a medical man, and as a lecturer on pharmacy and materia medica, rather than as a politician. Mr. CARTEIGHE replied, explaining that in accepting the compliments for himself he felt somewhat in the position of Mr. Disraeli as represented in the *Punch* cartoon when he had stolen the clothes of the

bathers, inasmuch as he was reaping the reward of the work which his predecessors had done.

Sir FREDERICK ABEL replied for the guests, and his speech concluded the programme as announced, but when he had finished the PRESIDENT said that Dr. Andrew Clark had also been asked to answer to this toast, but had excused himself. Now, however, he was willing to add a few remarks. Dr. CLARK then made the most spirited speech of the evening. He announced that he hated after-dinner speaking, and his only reason for breaking his rule of never making an after-dinner speech was that he considered that in what had been said that evening nothing like justice had been done to the Pharmaceutical Society. He warmly eulogised the work of the Society, especially in its efforts to ensure that strict accuracy in dispensing prescriptions should be observed. Such conscientiousness was not a small thing. It was the cultivation of a true and loyal spirit which lifted up both the individual and the Society. This was pleasant to say; but he wanted to say something also which would not, perhaps, be so pleasant, and that was in reference to the tendency to advertise and push secret remedies. This was a tendency they should discourage, and until they did so they would not reach their rightful position in the social organisation. This advice, coming from one who is known to be one of the most frequent prescribers of proprietary preparations, put the party into excellent humour, and the company, numbering among them many who had made themselves "undesirably rich" by means of special medicines, withdrew for coffee and conversation for another hour, and separated about midnight.

## THE CONVERSAZIONE

At the South Kensington Museum, which was held on the next evening after the annual meeting, was attended by about 2,600 ladies and gentlemen, and was generally recognised as a pleasant opportunity for friendly association. The Lord Mayor and Sheriffs again appeared, and the evening passed away in the usual agreeable manner.

## Metropolitan Reports.

### THE CHEMISTS' ASSISTANTS' ASSOCIATION.

The annual meeting of this Society was held on May 16. The report of the Council, which was read and adopted, stated that the Association numbers 90 ordinary and 17 honorary members, 55 new members having been enrolled during the session, showing an increased numerical strength of 29 for the current year.

The financial position of the Association is highly satisfactory. During the session 22 ordinary meetings had been held, with an aggregate attendance of 508, being an average of 23, and papers had been contributed by W. Elborne, H. H. Millhouse, F. H. Alcock, H. Cracknell, R. Winfrey, C. E. Stuart, B.Sc., W. A. Wrenn, W. T. Cooper, jun., C. Thompson, C. E. Palmer, C. L. Wyatt, W. R. Dodd, R. W. Giles.

Five social meetings had also been held, and an evening devoted to the discussion of a resolution approving in the main of the Draft Pharmacy Acts Amendment Bill.

A Conversazione held at St. James's Hall in November was well attended, and the Annual Dinner held in February, under the Presidency of Michael Carteighe, Esq., was successful in a marked degree.

The following gentlemen were elected members of the Council for the ensuing year:—Messrs. F. A. Alcock, J. O. Braithwaite, W. T. Cooper, jun., H. Cracknell, W. R. Dodd, J. H. Hartridge, H. H. Millhouse, C. Parkinson, T. F. Perkins, G. S. Snow, C. Thompson, R. Winfrey, and W. A. Wrenn.

PHARMACEUTICAL FOOTBALL CLUB.—At the annual meeting of this club held on Thursday, May 10, at Bloomsbury Square, the following officers were unanimously elected:—President, Professor J. Atfield, F.R.S.; vice-presidents: M. Carteighe, Esq., R. Bremridge, Esq., S. Plowman, Esq., T. Greenish, Esq.; captain, Mr. C. Thompson; vice-captain, Mr. J. Pemberton; treasurer, Mr. G. E. Jones; secretary, Mr. J. O. Braithwaite. Committee: Messrs. Lucas Job, Davis, Ehort, Howell, and Ince. A vote of

thanks, proposed by Mr. Braithwaite, and seconded by Mr. Thompson, was accorded by acclamation to the late Captain, Mr. A. Lucas, for the extremely able manner in which he had filled that post since the formation of the club three years ago. The club now numbers about sixty members, many of whom take an active part in the game. The executive look with confidence for the hearty support of athletic pharmacists during the coming season, and have already made arrangements for several matches.

**ROBBERY OF DRUGS.**—At Guildhall, on June 6, William Dell, Ilberton Road, Rotherhithe, a wholesale druggist's assistant, was charged before Sir Thomas S. Owden with stealing drugs from his employers, amounting to a considerable sum. Mr. Rothwell (Humphreys & Son) prosecuted, and stated that the prisoner had been in the employ of Messrs. Evans, Lecher & Webb, wholesale druggists, of 60 Bartholomew Close, for about two years and a half as counterman. Having missed quantities of goods, Mr. Forsyth, the manager, determined to search each man as he left the premises. The result was that he found in the prisoner's bag three bottles of drugs, the value of which was about 10s. He charged the prisoner with having taken more, and he (the prisoner) then went into the warehouse and brought back a parcel containing 1 lb. of scammony, value 30s. Mr. Forsyth then gave him into custody, and afterwards went to the prisoner's lodgings with the officer, and there found a large quantity of drugs, some of which were identified as belonging to the prosecutors. Sir Thomas S. Owden remanded the prisoner.

**CRICKET.**—**BAISS BROTHERS & CO. v. S. MAW, SON & THOMPSON.**—This match was played at Nunhead on Saturday last, 9th inst., on the ground of the latter team, and, after some very good play on both sides, ended in favour of the drugs representatives by 36 runs. Appended are the scores:—

*Baiss Brothers & Co.*

Mr. W. Standing, b. O. P. Jones	..	..	..	35
„ N. Womersley, l. b. w., b. Pyne	..	..	..	13
„ B. Womersley, b. Pyne	..	..	..	2
„ F. C. Welch, b. O. P. Jones	..	..	..	0
„ G. Welch, run out	..	..	..	20
„ H. Standing, b. Mitchell	..	..	..	4
„ J. H. Peckover, c. Taff, b. Mitchell	..	..	..	11
„ S. Cumberland, run out	..	..	..	3
„ A. Baiss, not out	..	..	..	1
„ S. S. Baiss, b. Mitchell	..	..	..	0
„ F. Goodall, b. Mitchell	..	..	..	0
„ F. Evans, b. O. P. Jones	..	..	..	0
Extras	..	..	..	11
				99

*S. Maw, Son & Thompson.*

Mr. Pyne, c. and b. S. C. Welch	..	..	..	0
„ R. Leng, b. S. C. Welch	..	..	..	1
„ O. P. Jones, b. S. C. Welch	..	..	..	27
„ Mitchell, c. S. S. Baiss, b. G. Welch	..	..	..	0
„ Frampton, c. and b. G. Welch	..	..	..	2
„ C. Jones, b. S. C. Welch	..	..	..	7
„ O. B. Taff, b. S. C. Welch	..	..	..	2
„ W. Lloyd, c. S. S. Baiss, b. S. C. Welch	..	..	..	5
„ Denmand, b. S. C. Welch	..	..	..	0
„ Brassett, b. G. Welch	..	..	..	1
„ Pilcher, not out	..	..	..	3
„ M. Fowden (substitute), b. S. C. Welch	..	..	..	0
Extras	..	..	..	15
				63

Fixture.—July 14, 1883. At Eton and Middlesex Ground, Baiss Brothers & Co. v. Burgoyne, Burbidges & Co.

**DRUMMERS.**—It has been discovered that the term “drum mer,” as applied to commercial travellers, was derived from the Arabic word, “dromedary.” The dromedary is the ship of the desert, makes long trips that nothing else on earth could stand, and in fact gets over more ground in a given space of time than any other animal that Noah had in his menagerie, and can abstain from water longer than any other creature. The only difference is, that the dromedary drinks enough ahead to last him the whole trip.—*American Bottler.*

## Provincial Reports.

### BIRMINGHAM.

#### MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

A meeting of the General Committee of the above Association was held at 23 Burlington Chambers, New Street, Birmingham, on May 31, 1883, the President, Mr. Joseph Lucas, in the chair.

Mr. Stokes Dewson having tendered his resignation as hon. secretary to the Association, the following resolution was unanimously carried:—

That Mr. Charles Thompson and Mr. Alfred Wright be requested to act as joint hon. secretaries to the Association *pro tem.*

### BRIDGWATER.

**CARBOLIC-ACID POISONING.**—Joseph March, aged 42, a pauper patient in the workhouse hospital, died last week from the accidental administration of a dose of carbolic acid. He had been ordered a dose of “household mixture” or “black draught,” a supply of which was kept at the workhouse hospital. The hospital nurse was a newly-appointed official, and, on asking one of the male paupers, who is occasionally employed as a wardman, where the “household mixture” was kept, he pointed out the one containing the carbolic acid, saying he was quite sure that was the right one. The nurse thereupon poured out the dose, which the wardman took to the deceased in an adjoining ward. She discovered the error just too late to remedy it. Emetics were administered, but without any result, and the medical officer was sent for, but before his arrival the man had died. It afterwards transpired that the bottle from which the fatal dose was taken was labelled “Carbolic acid; poison,” but it had so long remained unused that the label was almost concealed from observation by dirt and stains. The jury returned a verdict of “Homicide by misadventure,” and added the following rider:—“The jury desire to add that they are of opinion that all poisons should be kept under the immediate charge of the governor, securely locked and labelled in large letters with the word ‘poison’ and that such label should be kept free from dust and stains.”

### EXETER.

**TAKING OPIUM TO STEADY HIMSELF.**—On May 15 a man named Billings, employed in the wholesale drug stores of Messrs. W. Hunt & Co., at Exeter, was charged at Exeter Castle with having attempted to commit suicide by taking opium. He had been seen by one of the boys in the store to go to a shelf and fill a small bottle from a large vessel, which was afterwards ascertained to contain a strong preparation of opium. He had then gone home, and a messenger who was sent in consequence of the boy's statement found him lying on his bed insensible. One of Billings' employers, learning what had occurred, made up some emetics, went to the man's house, and personally administered them. He remained with him for two or three hours, causing him to be kept walking the whole time; but finding that he remained unconscious ordered his removal to the hospital. Billings was admitted to the hospital about noon. After twelve hours' treatment he rallied; and on appearing in court he showed no symptoms of the effects of the poisoning except a little nervous trembling. Billings stated that he took the opium for the purpose of “steadying” himself after a drinking bout. He had been drinking ever since Easter, and had often resorted to opium as a remedy for intoxication; but on this occasion he supposed that he must have taken a larger dose than he ought to have done. He assured the Bench that he would give up both the drink and the opium. The magistrates were of opinion that there had been no intention on the part of the accused to commit suicide, and they accordingly dismissed the charge.

### LIVERPOOL.

**ROBBERY OF DRUGS.**—At the Liverpool Police Court on June 9, before Mr. Raffles, George Devonport and Henry Sharples, two young men in the employ of Messrs. Evans & Sons, wholesale druggists, Hanover Street, were charged with stealing a quantity of patent medicines, the property of their employers. From the statement of Detective Wilde,



it appeared that, in consequence of a letter which had been received at the police-office, he went to the house of the prisoner Sharples, and there ascertained that he was employed at Messrs. Evans & Sons', Hanover Street. Witness then went there and saw Sharples and showed him a letter respecting a quantity of quinine which had been sold by him to a Mr. Josephs, at Hastings. The prisoner said, "I will tell you all about it. It is another man in the firm named Devonport who has brought me into this. He asked me about the middle of last month if I could dispose of some quinine for him. I said I could if he would get it. He sent me two bottles down from the shop, and the same night I brought two others down. A few nights afterwards the same thing was repeated, and I met him at the Central Station. I afterwards advertised the goods in the *Exchange and Mart*, and after receiving answers I sent two bottles to Mr. Josephs, of Hastings, and two to Mr. Woods, of Helston." Witness then brought the man Devonport into Sharples's presence, and the latter repeated that statement before Devonport, who, when charged, said, "Yes, it is correct." Witness subsequently showed Devonport a letter respecting this transaction in the name of John Lewis, 19 Gelling Street, and he said, "Yes, it is my writing. I supplied the medicine to the apothecaries at Glasgow, and yesterday I went there and drew 24/4s." On searching him 17/17s. of that money was found on him. In answer to the question, by Mr. Raffles, of what they had to say, they each pleaded guilty; but as further inquiries were necessary the prisoners were remanded for a week.

**ONE FOR WHITEHALL.**—At a meeting of the Tenth Board of Guardians held on May 17 it was reported that a letter had been received from the Local Government Board stating that the district auditor had reported to them that no account of the consumption, by paupers, of drugs supplied to the outdoor dispensary by the guardians was kept by the dispenser. The Board desired to be furnished with the observations of the guardians on the matter.

The Clerk had prepared the following reply, which he read:—"My Lords and Gentlemen,—I am directed by the guardians to acknowledge the receipt of your letter of the 11th instant, in which you state that the auditor had reported that no account of the consumption by the paupers of the drugs supplied to the outdoor dispensary by the guardians is kept by the dispenser. I am to say that as pills, plasters, decoctions, syrups, and other medicines are dispensed on the order of the medical officers from drugs bought in bulk, it is difficult to see how any account in detail could be kept of their consumption by the paupers. The drugs are contracted for, ordered through the order cheque book, invoices for them are examined by the guardians and myself, and a stock-book is kept. The guardians, even with the assistance of members of the Pharmaceutical Society who have seats on the board, felt incompetent to formulate an efficient, or anything like an efficient, check beyond their personal watchfulness and observation; and as any extravagant use by the dispenser of prussic acid, belladonna, nitric acid, arsenic, nuxvomica, sulphuric acid, strychnine, or castor oil as condiments would be followed by immediate exposure and detection, they thought a graceful confidence in his integrity would be a better protection against a depraved palate such as an apothecary might have acquired by long familiarity with his pharmacopœia than the institution of a worthless check." (Laughter.)

The guardians approved of the reply, and ordered it to be sent to the Board.

#### LEICESTER.

**ROBBING THE TILL.**—On May 17 Athol Dawson was charged with stealing two shillings and one florin, the property of his employer, Stephen Wand, chemist, Haymarket, on May 16. Prisoner had been in the prosecutor's employ about three weeks. The theft was detected by means of marked coins. The prisoner stated that he took the money out of the till, but not with any felonious intent. He wanted it to meet some heavy expenses he had incurred, and would have paid it back when he drew his monthly wages. The manager stated that he had good references as to prisoner's character. He had been suspected before, and that was the reason why the money was marked. He could have had money if he had stated that he was in difficulties. The Bench sentenced prisoner to two months' hard labour.

#### MANCHESTER.

##### THE MANCHESTER CHEMISTS AND DRUGGISTS' ASSOCIATION AND THE PHARMACOPOEIA.

The Council of this Association met on June 1, to consider a communication from the chairman of the Pharmacopœia Committee of the General Medical Council, inviting suggestions respecting the proposed new edition of the British Pharmacopœia. After discussion, the following resolution, proposed by the chairman and seconded by Mr. A. H. Jackson, B.Sc., was carried unanimously:—

That whilst thanking the Pharmacopœia Committee for the opportunity afforded to the Manchester Chemists and Druggists' Association to offer suggestions regarding the proposed new edition of the British Pharmacopœia, this Council is of opinion that for the full appreciation and useful application of such suggestions as the Association might be able to make, it is essential that the Pharmacopœia Committee should include representatives of pharmacy and it therefore awaits such an alteration in the constitution of the Committee as will give to pharmacy and pharmacists a recognised position therein.

Arrangements were made for obtaining signatures to a petition for presentation to the House of Commons in support of the memorial addressed by the Council of the Pharmaceutical Society to the Privy Council, urging the importance of establishing a Pharmacopœia Committee to include pharmacists as well as medical practitioners.

A deputation was also appointed to wait on one of the members of Parliament for the city soliciting his support.

**INLAND REVENUE PROSECUTIONS.**—At the Police Court on May 23, Alice Lawton, chemist and druggist, Moss Lane, Hulme, was charged with selling patent medicines without proper Government stamps on, and in this manner evading the patent-medicine duty. Mr. Alpe said that the liability to medicine-stamp duty was apparently little understood in Manchester. He pointed out that there were four elements or causes of liability:—The claim to the possession of an "occult secret or art" in making a medicine; claim to an exclusive right; protection by letters patent; and, lastly, the recommendation of medicine to the public as nostrums or proprietary medicines, or as specifics, or as beneficial to the prevention, cure, or relief of maladies. It was not necessary to bring a medicine under all these causes of liability. If it was covered by any one of them it would be liable to duty. Under the last head the vast majority of dutiable medicines fall. The recommendation may be printed upon an ordinary chemist's label, or it may be upon the wrapper, or the medicine may be advertised by handbills or showcards or in the newspapers. Mrs. Lawton had adopted the device of wrapping one medicine in a handbill which puffed the merits of another article. The labels placed on the bottles did not in themselves render the seller liable to the patent-medicine duty. The medicines thus illegally advertised by Mrs. Lawton were "Lawton's Celebrated Infant Preservative," "Lawton's Tic douloureux Drops and Pills," which came under the head of "proprietary medicines," and an embrocation thus described by the label, "Embrocation for Rheumatism, Pains, &c. This embrocation is invaluable in all kinds of sprains, bruises, or contusions—relieving pain." Mrs. Lawton was defended by a solicitor, but the magistrate, after some discussion, held that the liability of all the articles to duty was clearly established, and imposed 40s. and costs in each case.—Mr. William Ramsden, chemist, Upper Moss Lane, was also charged with similar offences, one with respect to a bottle of quinine and iron tonic, which was described on the label as "an excellent remedy for neuralgia," and another described as "Ramsden's concentrated essence of sarsaparilla." Defendant said he had acted quite ignorantly in the matter. He had no intention or desire to defraud the revenue, and he was satisfied that half the chemists in Manchester were doing the same thing, though that of course did not exculpate him. He did not push the sale of the medicines in any way whatever. The quinine and iron tonic was the ordinary preparation, and it had never occurred to him that the statement that it was beneficial to neuralgia would make it chargeable. The magistrate imposed a fine of 20s. and costs in the first case, and ordered the defendant to pay the costs in the second case.—At the County Police Court, Mr. James

Bond, chemist, of Cornbrook Street, Stretford, appeared to three summonses charging him with selling medicines liable to duty without having paid such duty. In two of the cases the defendant admitted the offence, but pleaded ignorance. With regard to orange quinine wine forming part of the charge, he denied that a stamp was required. It was made according to instructions given in the British Pharmacopœia, and under the Pharmacy Act no duty had to be paid. Mr. Alpe, who conducted the cases on behalf of the Inland Revenue, proved, however, that a showcard was exhibited in the defendant's shop-window recommending this particular preparation in such a way as to bring it within the scope of the Act and render it imperative that it should be properly stamped. Defendant said that there was no desire on his part to defraud the revenue. He was simply following a practice adopted by every chemist in Manchester. Mr. Alpe said it was not properly understood in Manchester that medicines of this class were liable to duty. The magistrates inflicted the nominal penalty of 2s. 6d. in each case and the costs.

#### NOTTINGHAM.

NOTTINGHAM CHEMISTS' ASSOCIATION.—The annual meeting of this Association was held on May 29, the President, Mr. Councilor Fitzlugh, F.C.S., in the chair. The annual report of the Council showed that the Society was in a very satisfactory position. The interest of the members had been manifested by an improved attendance at the meetings. The treasurer's report showed a balance to the credit of the Society larger than any since its formation. The report was adopted upon the motion of Mr. F. White, seconded by Mr. Wilford, and a long discussion ensued upon the best way of using the balance in hand, so that it might be put to some use for the advantage of the Society, and several suggestions were referred to the new Council for their consideration. A letter having been received from Mr. Warriner, hon. sec., resigning his position as honorary secretary of the Association, a cordial vote of thanks was passed to him for his services during the past three years, with expressions of regret at his inability to retain the office. On ballot the following were elected:—President, Mr. Councilor Fitzlugh, F.C.S.; Vice-President, John Wilford; Hon. Secretary, C. A. Bolton; Council, Messrs. T. B. Fletcher, M. H. Humphries, W. W. Holgate, J. Lewis, C. W. Warriner, W. Oldershaw, F. White, and A. Smith.

#### PLYMOUTH.

PURCHASING PRUSSIC ACID.—An inquest was held at Plymouth on a youth named Evans, aged 17, a junior reporter on the *Mercury*, who had poisoned himself by prussic acid. The evidence as to how he obtained the poison was given by P. C. Ryder, who said he was on duty at the Central Station. Deceased was in the habit of frequently calling there. On Thursday morning he said to witness, "I want to get rid of a large Newfoundland dog; which is the best way?" Witness told him to poison it, and volunteered to administer poison. On Saturday morning he again came to the station and said the dog was not getting any better, and would witness assist him in getting some poison. He said, "You know me well enough," and witness told him he had better get sixpennyworth. They then went to Mr. Wilmot's (late Lewin's) shop, and asked for sixpennyworth of prussic acid to destroy a dog. The chemist gave witness the poison without any hesitation, as he was known there officially. Deceased took the bottle and he paid for the poison. He appeared quite collected, and in his right senses. He said it was his father's dog, and there was no chance of its recovery. Witness suggested he should bring the dog to the Guildhall and he would destroy it; but Evans said it could not walk, and that he lived at Laira Bridge Terrace.

#### ROCHDALE.

CHEMISTS AND THE PHARMACOPŒIA.—A petition from the chemists of Rochdale was presented to the House of Commons by Thomas B. Potter, Esq., on Thursday, May 31, praying for a clause to be inserted in the Medical Act Amendment Bill for the purpose of placing pharmaceutical chemists on the committee for compiling and revision of the Pharmacopœia.

#### CHEMICAL SOCIETY.

April 19.

DR. W. H. PERKIN, President, in the chair.

The following gentlemen were elected Fellows:—T. L. Briggs, J. A. Barker, J. B. Coleman, W. H. Cannon, E. C. Conrad, C. Gillett, E. C. Henning, N. K. Humphreys, L. Levy, A. Ness, V. J. Schopoff, A. E. Wilson.

The following papers were read:—

"On the Gases Evolved during the Conversion of Grass into Hay," by P. F. Frankland and T. Jordan. The authors find that comparatively dry grass soon evolves considerable quantities of carbonic anhydride, with mere traces of hydrogen and hydro-carbons; this evolution of gas occurs in air, and in an atmosphere of carbonic anhydride or hydrogen. In oxygen a notable proportion of nitrogen accompanies the carbonic anhydride. Under water grass also evolves carbonic anhydride with some hydrogen, due, probably, to lactic fermentation; acetic, lactic, and propionic acids being simultaneously formed.

"Note on an Apparatus for Fractional Distillation under Reduced Pressures," by L. T. Thorne. The object of this apparatus is to facilitate the removal of the various fractions of the distillation without breaking the continuity of the distillation.

"Notes on the Condition in which Carbon Exists in Steel," by Sir F. A. Abel, C.B., and W. H. Deering. Two series of experiments are given by the authors. In the first the differences between cold rolled, annealed, and hardened samples of the same steel are investigated. The steel discs were subjected to the action of a saturated solution of potassium bichromate containing 5 per cent. by volume of sulphuric acid; in each case a blackish residue, consisting of a carbide of iron, was left. In the case of the cold rolled and annealed discs the carbon in this residue corresponded pretty closely with the total carbon present; but in the hardened disc only one-sixth of the total carbon was found in this residue. In the second series of experiments the action of various strengths of bichromate solution in cold-rolled steel is studied, and it is proved that, if the oxidising solution be not too strong, a residue consisting of a definite carbide  $\text{Fe}_3\text{C}$  is left; and that the carbon is therefore not simply diffused through the mass, but exists as a definite compound capable of resisting the action of a solvent which rapidly dissolves metallic iron.

"On the Spectrum of Beryllium, with Observations relative to the position of that Metal among the Elements," by W. N. Hartley. From a photographic study of the spectrum the author concludes that beryllium is the first of a dyad series of elements, of which in all probability calcium, strontium, and barium are homologues.

May 3.

DR. W. H. PERKIN, President, in the chair.

The following papers were read:—

"On a New Oxide of Tellurium," by Dr. E. Divers and M. Shimosé. When the compound of sulphur trioxide and tellurium, discovered almost simultaneously by the author and by Weber, is heated in a vacuum, sulphur dioxide is evolved and a new oxide of tellurium is formed, containing one atom of tellurium to one atom of oxygen. The decomposition takes place between  $180^\circ$  and  $230^\circ$ . This oxide is black and quite stable at ordinary temperatures in dry air. No compound of this monoxide has yet been prepared, but in its properties it is essentially different from a mixture of tellurium and dioxide.

"On Tellurium Sulphoxide," by Dr. Divers and M. Shimosé. The authors prepared this compound by pouring sulphur trioxide on tellurium finely powdered and dried. It was purified from sulphur trioxide by heating to  $35^\circ$ , and exhausting with the Sprengel pump. It is a red amorphous solid, quite stable at ordinary temperatures in sealed tubes. When heated in a vacuum to  $90^\circ$  it is changed into a bright fawn-coloured modification.

"On a New Reaction of Tellurium Compounds," by Dr. Divers and M. Shimosé. When sulphuric acid containing a small quantity of tellurium dioxide or sulphate in solution is poured into a hydrogen generating apparatus, and the escaping hydrogen passed through a second portion of the telluretted sulphuric acid, a beautiful red colour, due to tellurium sulphoxide, is rapidly developed.



"On a Simple Modification of the Ordinary Method for effecting the Combustion of Volatile Liquids in Glasers' Furnace with the Open Tube," by Watson Smith. The author causes the end of the combustion-tube to project from the furnace, and volatilises the liquid by gently warming the current of gas with a Bunsen burner.

"On the Production of Ammonia from the Nitrogen of Minerals," by G. Beilby. The author gives the results obtained with typical oil and coal shales when distilled (1) at a low red heat; (2) at a low red heat in a current of steam; (3) at a low red heat in a current of steam, the residual coke being afterwards subjected to the prolonged action of steam, so that a large portion of the coke is consumed, and the nitrogen in it liberated as ammonia. Thus a sample of oil-shale furnished, by 1, 2.7 lbs. of nitrogen as ammonia, per ton; by 2, 3.9 lbs.; by 3, 12.0 lbs.

"On the Specific Gravity of Paraffin-wax, Solid, Liquid, and in Solution," by G. Beilby.

May 17.

DR. W. H. PERKIN, President, in the chair.

Capt. W. de W. Abney, F.R.S., delivered a lecture "On Photographic Action Studied Spectroscopically." The lecturer said he wished that all chemists were photographers; photography occupied the borderland between chemistry and physics. He was firmly convinced that photographic action was interatomic. The action of a developer was then experimentally illustrated. This action is physical. Light causes the liberation of iodide in a film of silver iodide, and the developer precipitates metallic silver. The silver so reduced is infinitesimal, and must be in many cases derived from the film. The positive pole of the electric arc was found to be the best source of light. Gratings could not be used for quantitative work, as they varied so much in their ruling. A glass prism was therefore used to form the spectrum. A film of silver chloride absorbs only the violet end of the spectrum; silver iodide absorbs more, and the bromide most of all. Accordingly, when a photograph of the spectrum was taken on these three films it was seen that the portion of the chloride acted upon was very much less than when bromide of silver was used. It was shown that a sensitiser essentially takes up the halogen liberated by the action of light. One salt of silver may act as a sensitiser to another salt of silver. Photographic action is completely prevented by the presence of oxidisers, as bichromate, &c. Reverse photographs were discussed and the action of sodium sulphate in preventing the evil effects of over-exposure. The peculiar green condition of silver bromide, which is sensitive to ultra-red rays, was explained. In conclusion, the lecturer said that his principal object was to warn chemists of some of the numerous pitfalls which they might encounter in scientific photography.

June 7.

DR. PERKIN, President, in the chair.

The following papers were read:—

"Laboratory Notes," by J. H. Gladstone and A. Tribe. (1.) On the action of light and heat on cane and invert sugars. Cane-sugar solution, when heated, forms a small quantity of a substance which is not alcohol, but which gives the iodoform reaction. (2.) On hydroxylamine. The copper zinc couple reduces this substance, ammonia being formed. (3.) On the recovery of iodine from organic iodide residues. The residues are poured on an excess of the couple, and the iodide of zinc formed extracted with hot water. Iodine is obtained in the free state by the action of hydrochloric acid and bleaching powder on the iodide. (4.) A residual phenomenon of the electrolysis of oil of vitriol. The formation of Berthelot's persulphuric acid was noted. (5.) On an alleged test for alcohol. Davy suggests that alcohol can be detected by the blue colour produced with a warm solution of molybdc anhydride in oil of vitriol. The authors find that other reducing substances and sugar give the same reaction. (6.) Reaction of the couple on nitric oxide. Ammonia is formed, but no protoxide. (7.) On the reducing action of spongy lead.

"Note on a Basic Ammonio Copper Sulphate," by S. U. Pickering.

"Notes on Loew and Bokorny's Researches on the Probable Aldehydic Nature of Albumin," by A. B. Griffiths.

"Note on the Action of Sulphuric Acid, sp. gr. 1.81 upon

Potassium Iodide," by H. Jackson. The author has investigated this reaction quantitatively. He finds that two reactions occur, one with an excess of sulphuric acid, when iodine and sulphur dioxide are formed; the second, when just sufficient sulphuric acid is used to satisfy the potassium iodide. Iodine and sulphuretted hydrogen are then liberated.

"The Action of Nitrous Anhydride on Glycerin," by O. Masson. The author obtained the trinitrite of glyceryl. It is an amber-coloured liquid, boiling at 150°; burns with a white flame, but does not explode under the hammer. It is decomposed by water and cannot be preserved. In sealed tubes it generates sufficient gas to shatter the glass.

## INTERNATIONAL FISHERIES EXHIBITION.

THE pharmaceutical interest of this great exhibition is not so trifling as it would seem at first sight. We were rather surprised at the length of the list we noted in glancing through the catalogue. Cod-liver oil and sponge are naturally called to mind at once; then we must add isinglass, other medicinal oils, such as skate, ling, oolachan or oolaban oil, spermaceti and whale oils, ambergris and amber, iodine, iodides, and salt, cuttlefish, leeches, chondrus crispus, anti-fat, ice and antiseptics for preserving fish, medicine chests for fishermen, and cutch, which is used for tanning nets. There is one defect as noticeable in this as in other exhibitions. The ship is spoiled for want of a ha'porth of tar, or, in other words, the exhibits are not nearly so interesting and valuable to the public as they might be, because in most instances no information is given about them, and no attempt is made by explanatory labels to render them intelligible to any but experts. The most noticeable exceptions to this rule are to be found in the United States section, where many exhibitors have prepared tasteful and interesting pamphlets descriptive of their displays. The rival liquid-isinglass makers of Gloucester, Massachusetts, and the Menhaden-oil makers, of Milford, are firms to whom the worried reporter is specially grateful for the substantial information he has borrowed from their pamphlets. To report on a series of exhibits with bare labels is worse almost than making bricks without straw.

## USES OF ISINGLASS.

The applications of isinglass are best illustrated in the United States section. In the English section cements are shown by Messrs. J. Marshall, of Peckham Park Road, and A. A. Davies, of Huntley Street, but their American rivals, the Gloucester Isinglass and Glue Company, and the Russian Cement Company, both of Gloucester, Massachusetts, far outstrip them. It appears from the descriptive pamphlets published by these firms that a new industry arose in 1872, that of preparing dried codfish for the market by stripping off the skins and bones and packing the fish in small boxes. The skins and bones were very troublesome to the packers, who willingly paid 25c. to 30c. a ton to have them removed. Mr. John S. Rogers, of Gloucester, tried to convert this refuse into a fertiliser, but found it was too salt, the skins would not work up nor the bones dissolve. He noticed that the skins felt sticky, and determined to try to manufacture isinglass. He offered the packers 5c. a barrel to keep the skins separate, and after various experiments produced fish-glue, such as that shown here. The statement published by this firm carries us no further, but that of the Russia Cement Company gives details of a somewhat similar enterprise. Mr. Le Page, the inventor of the process which forms the basis of the business, had his attention called to the difficulties of working with glue in making furniture. It had long been known that glue is much stronger when freshly made than after it has been dried and redissolved. All cooks know, or should know, that if their jellies are boiled too long they refuse to "jell," the gelatinous material being destroyed by prolonged heating. Carpenters, too, know that glue is spoiled by heating it too often and too long. The Turks use a fish glue for fastening precious stones in their setting, and this is the basis of the celebrated Armenian or diamond cement. The Laplanders join the pieces of wood of which their bows are made with glue extracted from the skins of the perch. This glue, which was

made only in small quantities, owed a considerable portion of its wonderful tenacity to the fact that it was never dried until after it had been applied to the article cemented. After much labour Mr. Le Page discovered how to preserve a liquid glue from putrefaction under all circumstances. Apparatus was designed for preparing this glue from isinglass with the least possible exposure to heat. The business was begun in Boston in 1876, under the style of the "Russia Cement Company," and the article first produced was made from Russian isinglass and used for the manufacture of leather belting. By this time the business of packing boneless cod had grown to such an extent that nearly 3,000 tons of skins and bones were annually produced. Mr. Le Page turned his attention to the manufacture of cheaper glues for more general use from this material. In 1878 the business was removed to Rockport, and in 1881 to newly-built premises at Gloucester, Mass. They can now turn out 6 tons a day. The building is situated on the side of a hill, and the raw material is received on the upper floor. It descends by gravity through the various stages till it is packed for shipment on the lower floor.

The liquid glues of both firms are used for making leather belting, for gummed paper and envelopes, for making court plaster, for veneering, for woodwork, and for general family and office use. The Gloucester Isinglass and Glue Company state that they are supplying all the United States manufacturers of court plaster, who produce \$50,000 worth of goods a year; also that 10,000 reams of paper were gummed last year in the United States with their liquid isinglass. The Russia Cement Company make also a special brand for sizing straw goods, which dispenses with sulphur bleaching, and straw and chip goods sized with it, instead of turning yellow, grow whiter with age. They also make it for boot manufacturers, for sizing textile fabrics, for the manufacture of table oil-cloths, and of artificial flowers. The skins of the cod and cusk yield most glue; those of hake, haddock, and pollock yielding but a small percentage. We understand that they intend to push their domestic glue in this country, and we think our readers would do well to take it into their own hands and keep it. The United States collective catalogue enumerates the following uses for isinglass, besides those already mentioned:—The manufacture of imitation glass, table-jellies and confectionery, adulterating milk, fixing the lustre of artificial pearls, lustreing silk ribbons, making lats, spoons, &c.

The Antitropic Company (W. F. Grier & Co.) have made a special effort to improve this occasion. They have a large stall decorated with tiles adorned with pictures of fishes of all kinds, and six larger designs of fishy characters, such as pelicans. They have also a fountain, and inform us that they had prepared a number of fish preserved with glacialine, which would be displayed in the open, but the committee declined to allow this. They have also prepared some neat boxes in form of a book, for sixpenny sample packets of their glacialine.

#### MEDICINAL OILS.

Of cod-liver oil little can be said. A large number of Scotch, English, and Norwegian firms exhibit specimens, and the only novel feature is the appearance of samples of Japanese oil side by side with oil from more familiar districts. Steam boilers and filters used in making the oil are shown by Messrs. Thomas Cormack & Sons, of Eyemouth, who claim to be the largest makers in Berwickshire. In the United States collective exhibit, No. 125, is a series of oil-bags, dippers, and other implements used in this manufacture. Messrs. Southall Brothers & Barclay show their now well-known series of the chemical constituents of cod-liver oil. The oil is shown in the Japanese section, while besides Lars Brekke, of Alesund, and Peter Möller, of Christiania, whose names must be known to most of our readers, there are no less than twenty Norwegian exhibitors of this commodity.

Other oils, which might be used medicinally or actually are to a minute extent, are exhibited in great variety. Mr. James Hay Henry, of Macduff, N.B., shows ling-liver and skate-liver oil; the latter is prescribed to a small extent, and is said to be more easily retained than cod-liver oil. Messrs. James McCombie & Co., of Peterhead, show haddock and ling oil. The Oolaban, or Oolachan, fishery is well represented in the British Columbian section, and an Oolachan rake is shown in the collective exhibit of the United States (No. 49),

while the oil is shown at No. 149. It is used by the Indian of the North-West coast for food and illumination, and has been introduced for medicinal use in this country.

#### [OILS NOT MEDICINAL.]

Oils for all purposes but use in medicine are yielded by so many marine organisms that any attempt to deal with them would require a whole number of THE CHEMIST AND DRUGGIST. In this department again the United States collective exhibit is the most complete and instructive. No. 111 is a model of a four-boat whale-ship with a decapitated sperm whale alongside, illustrating the manner in which the blubber is cut off, hoisted in, and lowered into the blubber-room; No. 113 is a model of tryworks transported by whaling-vessels, for extracting the oil from the blubber, with the receptacles for scrap and for cooling the oil; also miniature models of some of the implements commonly known as tryworks gear for manipulating the oil and scrap. No. 114 is a full-sized whale-boat with all fittings, duly labelled.

R. T. Linton, pharmacist, of Nicolson Street, Edinburgh, shows whale and sperm oil and large quantities of spermaceti. Under this heading they insinuate a menthol neuralgic cone, cetaceum being used in its manufacture. Mr. Henry, of Macduff, N.B., shows pure lineed oil used in waterproofing fishermen's clothing. W. Graham Carr & Sons show oils from the livers of cod, haddock, and skate; also porpoise, seal, and whale oils: stearine deposited from cod-liver oil, and used for making candles, cod-liver-oil cake for feeding cattle, and various manures. Wm. Laughrin, of Polperro, Cornwall, exhibits specimens showing how much oil can be obtained from the livers of the torpedo ray, common ray, ling, conger eel, dog-fish, and cod; Blundell, Spence & Co. show, among others, herring, shark, and sardine oils; Wm. Sinclair shows whiting oil and spotted dog-fish oil. The United States exhibit includes cottonseed oil, now largely used in place of olive for dressing sardines, and oils from the seal (used for lubricating), sea-elephant, grampus, porpoise (used for lubricating, painting, &c.); blackfish and porpoise-jaw oil (used for lubricating fine machinery, watches, clocks, and guns); alligator oil made in Florida, and oil from the sunfish, cusk, haddock, pollock, squid, and last and most important, perhaps, the menhaden.

It will be worth while to draw attention here to some curious facts recently made known in connection with these oils. It has been found that sperm oil, the oil of the bottlenosed whale, shark-liver oil, and African fish oil differ from almost all others, first by their low specific gravity, and secondly by their chemical character. Shark-liver oil, one of the lightest known, has a specific gravity of 865 to 869, and has resisted all attempts to saponify it. Sperm oil and bottle-nose oil have a specific gravity 875 to 883, and, unlike the oils of other cetaceans (sp. gr. 920 to 930), they resemble the waxes rather than ordinary oils. While the latter are composed of compounds of glycerine with about 95 per cent. of fatty acids, the two former yield only 60 to 65 per cent. of fatty acids and a large quantity of a body or bodies not yet investigated. Bottle-nose oil yields a deposit of spermaceti on cooling it to about 10° C. Sperm oil, too, not only from the head, but from all parts of the body, deposits spermaceti when cooled, and both oils seem to part with the whole of it when their temperature is reduced to 4° C.

Menhaden oil is not yet well known on this side of the Atlantic. The fish from which it is produced is common in all the Atlantic waters that wash the coast of the United States. It has received a multitude of names, and one of the most characteristic is bony fish, for it is too bony to be edible. Professor Goode, of the Smithsonian Institute, says that as a source of oil the menhaden is more important than any other marine animal. "Its annual yield usually exceeds that of the whale from American fisheries by about 200,000 gallons, in 1874 not falling far short of the aggregate of all whale, seal, and cod oil made in America." The George W. Miles Company, the principal exhibitors of this oil, have built a special manufactory and wharf capable of converting into oil and manures 2,000,000 of the fish each twenty-four hours. Such numbers can never be obtained, and to supply the factory with fish requires quite a little fleet of steamers and sailing-vessels. The oil is principally used for currying leather, and particularly in the extensive



tanneries of Russia; some of it is bought for illuminating-oil in coal-mines, to fill the tiny lamps that are secured to each miner's heavy cap; it also serves in the manufacture of rope, and in adulterating linseed oil—much of the “whale oil” offered for sale being at least two-thirds menhaden. These facts are taken from the interesting illustrated pamphlet published by the company. The United States catalogue adds that it is used for lubricating, as a paint oil, and in Europe for soap-making and for smearing sheep.

[Next month we shall give some details concerning sponge and isinglass.]

## THE AMSTERDAM EXHIBITION.

(BY OUR SPECIAL CORRESPONDENT.)

[The following account is from the pen of the correspondent whose graphic sketches of French pharmacy during the Franco-Prussian War appeared in our pages in 1871.—ED. C. & D.]

AMSTEL HOTEL, AMSTERDAM, May.

IN what is perhaps the most picturesque city within thirteen hours of London is now being held an international exhibition, and although at present in an incomplete state, with courts empty and an army of workmen about, it well deserves a visit.

It is early in the summer, but the hotels are full and there great excitement here.

The quaintness of the town deserves a few words: the pictures of Jan van der Heyden or Peter de Hooch might have been painted yesterday, so unaltered are the streets and canals in the last two hundred years.

All great cities afford contrasts, but here they are peculiarly striking.

From the Kalverstraat, with French shops and a busy bustling crowd, or the Dam, the central square filled with modern tram-cars, you pass in a few moments to the calm on many a little grass plat, enclosed in curious buildings, in various phases of the same architecture. And in this bright month of May, along the canals, which seem to form every other street, you admire the green trees that are the background of nearly every view in this city.

The Dutch are a practical people, they rely on themselves, and not on a paternal government, and this is seen on every side. It is a hot sunny morning. After consulting with the gigantic military hall porter, that friend of the stranger abroad, we wander through the picturesque streets. Past the clean and serious-looking *Apothek* with no scarlet lamp, or snaps or tooth-brushes, past a “Diamants slijperij” or diamond-cutting works, past many charity children, bright and cheerful in their various uniforms, some, orphans, in cloth dresses, one half black, the other half scarlet; past children playing here also at the *tesserie* or *tali*, the game that Roman children played 2,000 years ago; past women with the national lace head-dress, bearing gold plates and pins, unfortunately often surmounted by a cheap bonnet of the now fashionable shape of a *cinqe cento* peaked helmet; past also carts and boats of shapes at least 200 years old.

At length we reach the Tentoonstelling, or exhibition. Its façade, inspired by that pride of Holland, the Dutch East Indies, is imposing. At either extremity are tall and not ungraceful massive white columns, and above them, towering aloft, are two mighty pyramidal clusters of barbaric Oriental architecture, imposing from their mass and interesting from their innumerable details. Gigantic elephants stand at their base, and shawl draperies of vast extent connect them together.

The idea of the plain white column, with long narrow

apertures is a mistake; it is pure Moorish and not Eastern design, and the mounted Crusaders at the entrance are dwarfed by the elephants, but, as one whole, this façade makes a grand as well as a novel impression.

On the right of the main building is a large annexe for the Dutch Colonies. This is a most interesting exhibition of life in Java, an island with four times the population of Scotland, in many parts as dense as in Belgium. Here we have everything that pictures the everyday life of the Javanese: we seem almost to be leading their lives.

Everything they use, collected together; life-sized models, the products of the country, lying all around; on the walls, large paintings of the natives, their habits, hunting, with photographs of the flora and fauna, buildings and scenery; the tiger in the jungle, and the domestic buffalo on the farm. In glass cases are exposed their clothes and arms, their *battiks*, dyed in successive stages (the part not to be dyed covered successively with wax and dammar); native furniture lies about, with models of their boats, built by natives, up to 50 tons; in a word, their whole history, manners, customs, and amusements; while the heat of the hall, and several native Javanese women, small of stature and pleasant featured, and occasionally a passing man, yellowish-brown, with an olive-green tinge, without a trace of beard, complete the delusion that one is not in Europe, but in Java. There are many good pictures of the gorgeous native plants, especially two *Rafflesias* that we did not recognise; a photograph also of a growing *Rafflesia Arnoldi* shows the thick and numerous woody stems of this mighty parasite, nearly equaling in size the trunk of the tree supporting its life. Further on is a large collection of human skulls and skeletons, and on the walls some specimens from the Leyden herbarium, most interesting: the large *Nepenthes bicalcarata*, far exceeding in size the American *sarracenia*; *Caryophyllus aromaticus*, showing the clove growing as the unexpanded flower, and several just expanded; *Cinnamomum Zeylanicum* and *C. cassia*, with the three central ribs of the leaf strongly developed; *Coca erythroyylon*, with the characteristic portion of the leaf on either side of the midrib of a peculiar texture, the absence of which in recently-imported leaves on the London market has shown them not to be genuine. The Government exhibits good specimens of cinchonas from the Royal plantations, several in the log, with the bark, of good size, up to a foot in diameter: the white-frosted *Ledgeriana*, the twisted *Officinalis*, the now-neglected *Pahudiana*, and the rich, rusty-coloured *Succirubra*. A case of fine chemicals, shown by Dr. J. Schuchardt, of Gölitz, is curiously placed here; it contains good specimens of many rare chemicals, large crystals of nickel salts, and a fine example of osmic or hyperosmic acid in a small glass globe.

And there are many other things of interest.

Here, in numerous cases, are tusks carved so as to be quite pierced through; the thin, wavy kris, or dagger, silver inlaid and wooden sheathed; the ruby and gold muslins, delicate native jewellery, and the serene contemplative countenances of the carved stone idols. The buffaloes and small horses of domestic life, and the gold-bossed gongs of the Gamelan lead us on to a small life-sized plantation of tobacco-plants; the coolies engaged are only models, and the *Nicotiana tabacum* is artificial, but the bamboo house is real. In another annexe, further on, are natives from Dutch Guayana, men with glossy-brown skins, modelling pottery; Creole women from the West Indies (“twee negerinnen”), in gay calicoes, always laughing; and a group of Cariben Indians, with feather coronets, basket-making.

Outside, on a branch canal crossed by Javanese bamboo suspension-bridges, are the surf boats of the Moluccas, very narrow, with an outrigger beam, and a Japanese *jerinka* stands hard by the numerous low houses made of the universal bamboo, some containing small native cattle. Several of these houses—to be inhabited later on—are of native woods, from Padang, Amboyna, and Bovenlanden; some,

very low, from Japara, and some, built high up on piles, from Makassar. Beyond this building is a conservatory, in which are some fairly good plants—none of any medicinal interest, but a beautiful *Nidularium innocentii*, a large thick-leaved monoeotyledon, the inner leaves, scarlet, inclosing as in a nest the small egg-like flowers—another, *Nidularium princeps-vera*, with amaranth-red leaves inclosing violet flowers. It is a pity that Haarlem has not sent some of its tulips, for we have before now seen large beauties in red and gold that still fetch long prices, although very far off that given in the days of the Tulipomania for the famous *Semper Augustus*.

The grounds, with the numerous buildings, in all styles, will prove the main attraction to most visitors.

Sitting in the terrace of one of the restaurants in the hot midday sun, and listening to the afternoon band, it was surprising to see so many nationalities in a short space of time. Chinese with umbrellas opened and fans in motion, the red fez of the Turk, the high black astrakhan cap of the Persian, and the white petticoat of the Albanian; smart French sailors hard at work, with stolid Belgian *Gardes* looking on; a Malay water carrier, with the elastic, ever-useful bamboo over his shoulder, while a Javanese maiden, lithe and demure, walks over from their Gamelan, and a stately West Indian mulatto, gay in large blue spotted white calico dress and handkerchief, carries a woolly-headed boy to his noon-day siesta.

On entering the main building of the exhibition, we come upon the Dutch portion, which is fairly complete. There are in this section several good exhibits of paints and varnishes, especially a case of Van Wijk, of Rotterdam, really a fine collection of varnish gums—Copals, Angola, Borneo, and Manila; Kauri, the fossil gum of *Dammara Australis*; Damar itself, from the gigantic conifer of the Moluccas; and shellacs, orange, liver, and button.

Doppelmau, of Nymegen, shows soaps, and Van Honten a pyramid of his cocoa. Curious to see, in an important exhibit of coloured lithographic work of L. van Leer, of Haarlem, coloured plates of English books that we thought were printed either in New York or with us, as the Christmas child's book, "Wee Babies."

Brocades & Stheeman, of Meppel, are apparently wholesale druggists, and are among the very few who exhibit here pharmaceutical products; their spirituous extracts in hard cakes are not so dry as the desiccated friable French ones of Granval, but probably would be equally hygroscopic in use. Wheat, poisoned with strychnia and dyed purple, is novel, but their carbonate of iron, so labelled, is orange coloured, and their flexible capsules so enormous that it speaks well for the swallowing powers of their countrymen. Inclosed is a sample one of castor oil, 1 inch by  $\frac{3}{4}$  inch in size.

Several fair samples of cod-liver oil, and the scarcity this year will stimulate these makers; already the French manufacturers in Dunkerque have resumed making oil from livers brought by their fishing boats from Iceland and Greenland.

Ropes and boats in abundance, and especially elaborate modes of the dykes, showing the results of patient, strong, and therefore successful work.

Belgium has a large space, and many important things; glass, iron rails, cloth from Verviers, dresses covered with birds, but not much to interest us. Some enlarged botanical models of flowers, taking to pieces, but these, beautiful though expensive, are not novelties. Numerous exhibits of chemical manures, much used in the Netherlands, are here; Godfers, of Antwerp, shows logwood and other dye-woods; Koch & Reis, sulphur in various stages; and that we are here in the very land of chicory, where some actually say that it improves coffee, is shown by full-sized busts of King Leopold in compressed chicory.

Russia has some delicious little bronzes, such as a sledge at full gallop, with peasants in animated conversation, and the usual malachite display; Italy, the imitators of Castellan's antique jewellery. From the Brazils, Natte, of Rio, shows flowers made of feathers, all their natural colour, a pansy taking 2,000 of them; with native birds, in the case, whose plumage gives every tint that the artist's palette could ask for.

The collections shown by New South Wales, Victoria, and Jamaica make us fairly proud of our colonies. The maps of the Survey Department of the first-named give on

a large scale the coast, sea, and inland topography, clear, distinct, and of artistic execution. The Victoria photographs show a country rich in the scenery on which we pride ourselves at home, undulating hills and long sweeps of country, with in parts woodland and river beauty.

The collection from the Melbourne Botanic Garden is attractive. Among the numerous articles are *Ricinus macrocarpa*, with large fruit and seed; Botany Bay or grass-tree gum, a red resin, resembling dragon's blood, but with a brighter gloss and browner tint, from *Xanthorrhoea australis*; and gum *Aeroides*, a yellow resin from *X. hastilis*, used in varnishes for metal coating. Here also is a complete series of eucalyptus products: Oil of eucalyptus, principally from *E. odorata*; Eucalyptol, the larger portion of the essential oil of *E. globulus*, separated by fractional distillation; Eucalyptene, its amorphous bitter principle; and red gum, from *E. resinifera* (*E. rostrata*, according to some), similar to the kino of the *E. I. Pterocarpus marsupium*. Passing by those curious insects, so marvellously resembling dried twigs, and fine specimens of star antimony, we stop at the native products of Jamaica, and notice fair specimens of Quassia and drop Guaiacum.

India makes a poor display. It is true that Regent Street and Oxford Street shops send art fabrics and pottery, and the Calcutta Tea Syndicate sends calicoes of the usual shawl pattern, and promises tea later on; but we look in vain for the wondrous natural products, the drugs and spices, the native industries—some show, in fact, of what these rich regions produce, or what that teeming population manufactures. No: for examples of what Indian looms can bring forth or what Eastern hands can give us in metal-work we must go to the collection of the Prince of Wales, and, to the shame of England, a charge of 25 cents, or 5d., is made here. Nothing attracted more attention in Paris in 1878, and there no such paltry extra charge was made—surely in Amsterdam made without the knowledge of the Prince. It was sad, on a Monday, to see the Java annexe filled with an admiring crowd and to see this hall, containing Oriental works more gorgeous, and Eastern antiquities more interesting, the choicest examples from the collections of His Royal Highness, Lord Lytton, Sir G. Birdwood, M.D., and the South Kensington Museum, absolutely at one moment without a single spectator.

China is unpacking so many cases that it is evident a day will come when we in Europe must reckon with the manufactures of her immense population.

England makes a fair display; she has one-third the space of Belgium and one-quarter that of France. In many sections we miss well-known names, and see others here that are comparatively unknown with us. No fine chemicals, no drugs, or pharmaceutical preparations, could we see from Great Britain. Doulton, of Lambeth, makes a good display; his art work is always beautiful, and the subdued tones of his pottery blend in a harmonious whole. Price's Company shows a pyramid of candles; Gosnells some gigantic hair-brushes and, with Rimmel and Richardson, perfumery; the bottles are handsome, and their contents doubtless well manufactured, for English perfumery is generally good, and is gradually elbowing out the French from South America and other strongholds of theirs. F. C. Calvert has a series of sulpho-carbolates, labelled in Dutch; and R. Cresswell a case of sponges, bleached to a delicate lemon shade; this unnatural colour is certainly not liked in England. Bush & Co. have a handsome case, with good-looking fruit essences and essential oils, and it seems a pity that one of the quart bottles is enveloped in paper, concealing its contents.

Cantrell & Cochrane, of Belfast, show aerated beverages, as do also Pitt & Co., of London: the latter firm have the contract for these for the English refreshment department. Carr, of Carlisle, shows biscuits; Clarke, Niekolls & Coombs have a display of confectionery, effective, showy, and probably cheap; John Gray, of Glasgow, has the same, with *conversation lozenges* in English; it would be a good idea for these to be made also in French and in Spanish; for the latter, recently ordered from South America, the wholesale confectioners of Paris and London were asked in vain. — Corbett, of Droitwich, has a case of salt, and Louis Berger & Sons make the best display of colours in the whole exhibition. In the centre of a large glass case stands a bronze Mercury, and around it are ranged colours of all the tints of the rainbow—fine specimens, and artistically arranged.



In the centre transept we pass through Austro-Hungary, where Ernest Wahlliss exhibits some fine china, including remarkable vases with large, *dull* poppies in high relief on a *glazed* ground; here F. A. Sarg, of Liesing, near Vienna, shows glycerine and *millynachs*, or "cerasin," now coming into extensive use on the Continent.

France has the lion's share of space, but seldom have we seen so many courts containing only packing-cases of every size; the French colonies, however, make a capital display of raw native products. In the central hall are some well-known names with exhibits up to their reputation: Christoffe has some lovely specimens of enamelled glass and silver niello work, and vases of oxidised silver with green-gold raised designs; and Fromet Meurice has a beautiful show of artistic jewellery.

At present we do not see in this division many things to interest us—no quinine from Armet de Lisle, no chemicals from Dubosc or drugs from Darasse, but there may, perhaps, be something more interesting to the pharmacist when all the French cases are unpacked. A large empty *ritrine* with the name of E. Genevoix & Cie (the Pharmacie Centrale of the late M. Dorvault) gives promise of something worth notice; their collection of *Materia Medica* in Paris, over which, any morning, a number of *Elèves en Pharmacie* may be seen studying, is well worth a visit.

But specialties (our patent medicines) and their display, seem the peculiar feature in what is ready in this section of our neighbour's space. One division of a case is filled with bottles, all in pretty wrappers, of a *spécialité* of Boido, with not a leaf or even liquid to be seen, but plenty of prospectuses. Desnoix & Cie and A. Beslier both show plasters of all sorts; Marchand, of Dunkerque, oils, including that from the cod's liver; the patent-medicine proprietor L. Frère and Ch. Torchon (recently, after the latter's death, sold by the widow for 400,000!) has a case to be filled, and so also has M. Bravais. The collections from the French colonies are much more worthy of careful attention. Vanilla, from Martinique, large, soft, and finely frosted with crystals not too cottony, and large black seeds from the pods of the papilionaceous *Copaifera officinalis*; resin of thapsia, from Algiers, from the umbellifer *Thapsia garganica*, that has now almost entirely replaced, in France, croton oil as an irritant stimulant to the skin; Gamboge, from Cochin China, fairly good pipe, partly run and slightly damp; but just at present Tonquin musk is not included in drugs exhibited as coming from French colonies.

Japan is not ready, and the United States show very little. Seabury & Johnson have a good exhibit of plasters, and W. H. Schieffelin a very small case of coated pills. Germany makes a capital display, and nearly everything is in position; Fried. Krupp has a grand trophy of his big guns in the centre transept, and, though there are no drugs, the chemicals are about the only fine ones in the building. Faubel, of Cassel, has some good labels for pharmacists, and, judging from his specimens, prints a number for men in New York, Brooklyn, and San Francisco. It seems curious, that with such marvellous inventive powers in printing and engraving in the States, labels should be sent there from this little place.

Lohse, of Berlin, shows perfumery; many houses have cases of colours, both aniline and vegetable; G. Jetter, of Tuttlingen, some beautiful specimens of surgical instruments, and Bornkessel, of Mellenbach, a small collection of druggists' sundries of all sorts, from lancets, feeding-bottles, and barometers, to glass nosegays, hooks and eyes and "vexing glasses" to amuse children.

E. Sachsse, of Leipsic, has a nice gilt case, containing pretty glass decanters with essential oils; it may happen that here the case and bottles will be most admired, as they certainly most strike the eye. The Braunschweig (Brunswick) manufactory shows good Quinine, and Ferri et quinine citras, both of the Ph. N. and the B.P.; neither are pretty scales by any means. The "Fabbrica Lombarda" and Böhringer & Geijer have divisions in the same case; the former shows good crystals of tannate and bisulphate of Quinine. Böhringer & Sohn, of Mannheim, have a good display of the alkaloids of the cinchonas, especially large crystals of valerianate of Quinine, but here especially is to be seen the great fault of nearly covering the show bottles with gilding and fancy-work: one notices the gold of the label instead of the beauty of the chemical product.

Quite different is the neighbouring display of E. Merck, of Darmstadt. Here are tall, upright, perfectly plain, stoppered jars, with a white label at foot, bearing the simple name of the article. The most striking thing here is a large bottle of santonine of a beautiful bright yellow, put, evidently by an error, in a white bottle. But the collection of rarer organic chemicals is most interesting. Pure Podophylline of a pale buff, not a greenish yellow as produced by the alum process so common in the States; a fine specimen of Piperine; Helicine, the oxidation product of salicine (by synthesis the latter has now been made from artificial helicine); Papaine, digesting more than one hundred times its weight of animal muscle; Picropodophylline; Kosine, or crystallised Kousseine; the alkaloid Gelseminine in crystals; Cathartine acid from senna; Chlorogenine, from the Australian *Alstonia constricta*, now called by Hesse, Alstonine; crystallised Aconitine, from *Aconitum napellus*; and the same product from *A. ferox*; and many similar commercial results of modern researches in organic chemistry.

The picture galleries, at the extremity of the grounds, are alone worth the journey.

In a long series of well-lighted galleries, the French collection is a head and shoulders above any other country, and at present there is not a single picture in the English room. And this is unfortunate, as our school of painting is now appreciated as it deserves on the Continent. Sirgeant last year, Whistler's portrait in this year's *Salon*, Milais in the Rue de Sèze Exhibition—all are admired—while the *Salon* this May has nothing to surpass E. Long's *Arab* and Michal in the present Academy. The nearest approach to English art is an engraving of Charles Darwin by G. Flameng, and two figures from the London streets by Bastien Lepage, that Frenchman who every year raises such discussion in Paris by painting nature exactly as he sees it, taking his inspiration not from the studio but from the very face of nature herself. Bonnat, whose portrait of Thiers will be remembered in the Paris International of 1878, exhibits a marvellous likeness of the French painter Puvion de Chavannes, not in his studio, but behind a glass of water like a simple deputy. But we do not find that any of the great French portrait painters—Bonnat, or Cabanel, or Carolus Duran—surpass the force of Frank Holl or the grace of Millais. Madame V. Demont-Breton gives a charming idyl of the fields, "La famille," sober yet delicate, and G. Jundt, a family in a boat among the rushes: serious art producing a poetical effect.

Jules Lefebvre is an acknowledged master in the purest painting of the undraped figure, and has here a beautiful example. We noticed especially: Théodore Frère, "En Egypte," with the transparent colour of the East; J. A. Rixens, a powerful Messalina, with the title "Ferri ventrem," in the words Racine attributes to the mother of Britannicus; F. Montenard, "En Provence," with the fierce sun glaring down on the hot white earth of the south; Henri Motte, "Circe Transforming the Companions of Ulysses into Swine," but without the humour of the subject as treated in late years by our B. Rivière. In the other galleries E. I. Boks has a good genre subject, "De Erf oom," a humorous picture, and Ch. Kröner a capital drive of stags in winter over the snow. Florent Willems paints a sardin dress, not surpassed even by that in "The Black Brunswick," and Jan van Beers exhibits "La Sirène," a bride taking the first step down the pier towards the yacht, which was admired in last year's Academy.

Among the modern Dutch masters, the Israëls are far away the leaders of the school. Josef, under twenty-three years of age, shows "A Military Funeral in Holland"; and Isaac, the father, several pictures of deep feeling, sombre in colour and generally rather sad in sentiment. "The Knitting Lesson," already exhibited in London, is a delicious example of the master in his more cheerful humour; the faces of the children, learning from the old dame in an interior lighted up by the sun, are striking in their simple force and truth.

And now, on leaving Amsterdam, the pleasures of memory recall three special features of the exhibition that have left a marked impression on the mind: the gigantic façade, the French pictures, and the collection of those marvellous products of nature and art from the Dutch East Indian Colonies.

## THE HYGIENE EXHIBITION AT BERLIN.

SINCE the first international exhibition in London in 1851, exhibitions, international, national, and local, have been held throughout the civilised world. These, as a rule, have comprehended a very heterogeneous collection of exhibits, and, in the case of the international exhibitions, a good many of the collections have passed from one exhibition to another. So that in course of time these heterogeneous international exhibitions became so monotonous that they could only be kept alive by the adventitious aid of extravagant decorations, luxurious surroundings, grand concerts, and other extraneous additions. At this crisis it was again London which gave the idea of *special* exhibitions in the series held at South Kensington ten or twelve years since, which came to an untimely end in 1875. These were followed by the International Hygiene Exhibition at Brussels in 1876, in which the exhibits consisted essentially of objects and arrangements calculated to preserve, prolong, or save life, and formed the first exhibition which had philanthropic as well as commercial purposes.

The Hygiene Exhibition now open at Berlin is, therefore, the second of its kind, and, although non-international, is more complete than its predecessor at Brussels. The full German name is "Allgemeine Deutsche Ausstellung auf dem Gebiete der Hygiene und des Rettungswesens." As at Brussels, so here the attempt has been made to bring together as complete a collection as possible of everything in any way pertaining to health, the only difference being that in this case the exhibits are all of German origin.

The Berlin Hygiene Exhibition was to have been opened last year, but the chief building (which was then of wood) was burnt four days before the date appointed for the opening ceremony.

The exhibition has been carried out somewhat on last year's plan, and consists essentially of (1) a chief building (this time of iron and glass), built on a kind of conglomerated cell system, covering an area of 11,500 square metres; (2) of twenty-two arches of the metropolitan railway, which passes through the grounds, which have been fitted up for exhibition purposes; and (3) of a number of tents, pavilions, kiosks, and whatever names the various constructions may have, dispersed through the grounds, which likewise contain various exhibits. The entire exhibition and grounds cover an area of 75,500 square metres.

In the park-like grounds there are promenades, music pavilions and restaurants, and in the evenings various systems of lighting are there displayed.

Entering the south-west portal of the chief building, and passing through the centre transept, we find charts, maps, plans, &c., showing the density of the population, the mortality and social condition of a number of German cities and towns, beginning with Berlin; with these are models of hospitals, lunatic asylums, prisons, schools, arrangements for gymnastic exercises, slaughter-houses, places of burial, systems of drainage, water supply, lighting, ventilation, and the like.

Group 16 (Krankenpflege) comprehends everything connected with the care of the sick and wounded, comprising surgical instruments, pharmacies, bed arrangements, &c.

Group 7.—Clothing and cleanliness, model bathing arrangements, clothing suitable to the different callings in life.

Southern part of the east transept (Group 2).—Food and dietetics, comprising arrangements for the distribution of food and for its preservation, harmless substitutes, and various exhibits.

North part of the same transept.—Drawings and plans of the Hygienic Institute at Munich, under Pettenkofer.

Group 26.—Mining and smelting works, arrangements for the prevention of accidents, appliances to prevent the inhalation of poisonous gases, injury to the eyes, &c., and models of institutes for providing for the intellectual wants of workmen.

North part of west transept (Group 16, again).—Especially remarkable are an ophthalmic chamber arranged by the Court official—P. Dörfel, Berlin—which contains a perfect collection of ophthalmic instruments and apparatus, including

the latest optical discoveries. Adjacent is an exhibit of the Society for Animal Vaccination at Leipsic, with a stuffed calf from which lymph is being drawn, and samples of lymph in glass tubes.

At the extreme north of the building are various fire-engines and apparatus for saving life and property from fire, and models of the Berlin fire-brigade at work.

In the right-hand corner of the northern end is an excellent library, containing a valuable collection of books in various languages on hygienic subjects.

A particular attraction in the chief building is a fine panorama of Badgastein, by Professor Hertel. Gastein is a favourite retreat of the German Emperor in summer, and the wild natural scenery here presented to the eye suggests the salubrious effects, both mental and bodily, afforded by such places.

Leaving the chief building at the north-west exhibit and passing to the right, we find a shed communicating with the lines of the Lehrte Railway, where are exhibited ambulance-trains completely fitted up for military purposes in time of war, including kitchens, lavatories, sleeping-berths, pharmacies, clinical apartments, and special arrangements for the transport of the sick and wounded. Coming to the railway-arches, we meet with the "Society of the Red Cross" of Vienna, exhibiting carriages and appliances necessary for assistance to the wounded in war.

Arches 18 to 21 contain exhibits of the newest arrangements for rendering the first assistance in cases of sudden accidents in factories, in the streets, or elsewhere. These include provision for the transport of injured persons, fitted up in cheap as well as costly style. This collection is made partly by the German Samaritan Society and partly by the Vienna Volunteer Humane Society.

Arch 18, and a separate house standing in the western part of the grounds, are devoted to cremation. The former contains drawings and models of various systems of cremation furnaces and chapels, coffins, and the like, while the latter is a perfectly fitted-up cremation chapel by Fredric Siemens, in which, on certain days, to show its efficiency, the carcases of animals are cremated.

Arch 25 contains various exhibits of the Hamburg Society for saving life at sea.

Among the special exhibits in the grounds are:—

1. A temporary stage (exhibitor Judlin, Berlin), representing a room in which a young lady, returned from a ball, has fallen asleep in her armchair, and has accidentally knocked over a petroleum lamp on her dress, only that part of the dress which has come into direct contact with the flame has burned; the material being impregnated the lady sleeps on unconsciously, and when she wakes we hope will duly bless M. Judlin.

2. Various cheap kitchens.

3. Pavilion for meteorological observations, with a variety of extremely ingenious instruments.

4. Cheap bathing-house for the poor at the rate of a penny a bath, including soap, hot or cold water, and a towel.

5. A miniature coal-mine with miners at work, being an excavation beneath an artificial hill filled up with coal in such a way, that the visitor to the sham mine can easily imagine himself transported to a real one.

6. In the extreme south-west corner of the grounds, a normal dwelling house, fitted up with every regard to sanitary and æsthetic requirements.

7. The pavilion of the Imperial Board of Health, where are exhibited laboratories fitted up with all necessary instruments and apparatus for examining food, water, and air, as well as others for conducting experiments with infectious and contagious diseases. A number of the germs of diseases are shown, cultivated on potatoes, amongst which are the tubercle bacillus, the bacillus of anthrax (Miltzbrand), of glanders (Rotzkrankheit), and a most curious organism, micrococcus prodigiosus, which produces an aniline colour (fuchsine) from the potato it is cultivated on.

This is a general sketch of the exhibition. If we find any objects of special importance, we will describe them more fully in a future note.

THE INTERNATIONAL PHARMACEUTICAL EXHIBITION AT VIENNA.—It is announced that His Imperial Highness the Herr Erzherzog Karl Ludwig has felt himself moved to undertake the protectorate of the above exhibition.



## PHARMACY IN AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, VICTORIA, April 23.

CONSIDERABLE interest has been taken in the proposed exhibition to be held in Calcutta.

The Government have appointed Mr. Joseph Bosisto, M.P., President of the Victoria Commission, and in the hands of so energetic a man there is no doubt that full justice will be done to this colony. Already there are large numbers of exhibits promised. It is proposed that the exhibits shall be shipped about September 15, and this will allow two months and a half for conveyance to Calcutta and placing them in position prior to the opening day.

The premises of Messrs. Hemmons, Laws & Co., of Russell Street, the well-known wholesale chemists and druggists, which were destroyed some time ago by fire, have now been rebuilt, and they have taken the opportunity during the alterations to make a great many improvements both in the building and the interior arrangements.

Extensive alterations have also been made in the building for the wholesale and manufacturing departments of Messrs. Wm. Ford & Co. (Messrs. Swift & Reed, proprietors). They have also entered into contracts for important additions to their front premises in Swanston Street, which, when completed, will make these premises one of the finest in the city.

At the meeting of the Pharmaceutical Society of Victoria, held on April 6, for the purpose of appointing office-bearers for the year 1883-84, all the retiring officers were unanimously reappointed.

The President, Mr. Bowen, in the course of some remarks made by him after his re-election, said he trusted during the coming year to see some of the works which had been inaugurated during the past twelve months successfully carried out. He referred specially to the possession and occupation of the new building, and the advantages likely to result from the intercolonial conference.

At the annual meeting of the Melbourne Chamber of Commerce the retiring president, Mr. F. S. Grimwade, delivered an interesting address, reviewing the trade and commerce of the colony during the past twelve months. On the subject of the recent prosperity, he expressed the opinion that the community over-imported last year. He avowed sanguine hopes as to the growth of the wine and hop-growing industries, and his remarks as to the desirability of promoting immigration were specially applauded.

At the request of the Pharmaceutical Society of New South Wales, Mr. Frederick Wright is preparing a paper on "The Progress and Prospects of Pharmacy in New South Wales," to be read at the next British Pharmaceutical Conference. Mr. Wright is well qualified to deal with the subject, and the paper will, no doubt, be an interesting one.

Mr. S. M. Burroughs, of the firm of Burroughs, Wellcome & Co., has been successful in inducing the Customs authorities of South Australia to decide that the Kepler extract of malt and combinations, not being patent or secret medicines, shall be admitted duty free. Mr. Burroughs when in Melbourne brought this matter under the notice of the Commissioner of Customs with a view of bringing about a similar result, having ample evidence that the duty was wrongly charged. No decision, so far as Victoria is concerned, has been arrived at.

Mr. Bowen, as President of the Pharmaceutical Society of Victoria, has addressed a communication to the various pharmaceutical societies in the Australasian Colonies, pointing out the desirability of uniformity in the educational curriculum amongst those bodies, and of assimilation thereof with that of Great Britain, with a view to an interchange of certificates.

Although general acquiescence is given to the proposal, there seems to be a want of energy in bringing it to a satisfactory issue, and on all sides excuses and delays are made.

Mr. W. J. Watkins, the representative of Messrs. Evans, Lescher & Webb, is at present in Melbourne, and makes a fine display of drugs and pharmaceutical preparations. Mr. Watkins remains for some considerable time in Victoria.

At a recent sitting of the Royal Commission on the tariff, evidence was taken with regard to aerated waters.

W. H. Dawbarn, a manufacturer of aerated waters, thought no protection was required for his industry. He sold his aerated waters at a lower price than was charged for them in any part of Great Britain. He did not want the duty on bottles removed. Colonial bottles could be made as good as the imported if manufacturers would give their attention to improving them.

G. H. Elliot, cordial manufacturer, disapproved of the duty on bottles. Colonial bottles were not to be compared with the imported. There was only one colonial maker, and consequently no competition. Colonial bottles were inferior to the imported, and more of them burst in filling than of the others. No doubt they could be improved if better workmen were obtained. The duty on bottles cost him about 60% a year, at 1s. 10d. to 2s. a gross. He had to buy about 600 gross of bottles. He preferred the English bottles even at the enhanced cost caused by the duty. The prices of imported and colonial bottles were now about the same.

Andrew Cobu, soda-water and cordial manufacturer, also wished the duties taken off bottles. He positively could not use colonial bottles. He had witnesses to prove that some of his men refused to fill the colonial bottles. He had been cut to pieces by them. He would not mind if he could see the bottles before he bought them, but he was not allowed to do so. He had to take the bottles as he could get them. It would be more convenient to get the colonial if they were as good as the imported, but he could not use them at all. Sometimes the colonial bottles could not be obtained. He would prefer to pay 32s. for imported rather than 27s. for colonial, considering the superior quality of the former. He thought ten bottle manufactories would be required to meet the demand here.

D. Jones, representative of E. Rowlands, aerated-water manufacturers, of Melbourne and Ballarat, said the colonial bottles had been improved, but they would like to see the duty on bottles reduced or removed. He did not ask for the remission of the duties on the ingredients used. The tariff hampered the intercolonial trade alone.

D. S. Harrison, importer of aerated waters, bottles, and corks, thought the colonial manufacturer of bottles had sufficient protection in the difference of between 60 and 70 per cent. which the cost of importing bottles made in their price. He believed the colonial bottles were very good now. It was not possible to depend on the colonial supply.

Evidence was also given in favour of the removal of the duty on corks for aerated waters, as it was stated that the colonial cutters only did trade in chemists' corks.

## ITALIAN PRODUCTS.

CONSUL-GENERAL COLNAGHI, Florence, reports to Lord Granville on the mining and chemical products of Italy, and from his tables we take the following:—

IRON PYRITES, employed in the manufacture of sulphuric acid, are subject, like iron, to an export duty of 22 centimes per ton. The average annual product is 4,000 tons, and the value 13 lire per ton. The total quantity of the ore at present supplied is from the mine of Brosso, above Ivrea. A portion is used in the sulphuric-acid factory at Turin, the rest exported to Marseilles.

SULPHUR.—The average annual product is 280,000 tons, of an average value of 109 20 lire per ton = 30,793,000 lire, or over 1,200,000% sterling. Of this total Sicily produces 242,000 tons. There is an export duty of 11 lire per ton on sulphur, and the average export is 216,000 tons. The Sicilian sulphur is mostly exported raw, as it comes from the kilns. It is of seven qualities, the values varying from 101 to 115 lire per ton. Except in the better worked "solfare," the separation of the sulphur from the earths in which it is contained is still conducted in Sicily by means of kilns, calcareoni, which do not require any additional fuel, but which entail the consumption and loss of about one-third of the sulphur itself. About 18,000 hands are employed in the Sicilian "solfare," of whom about 14,000 work in the interior of the mines, including the transport of the ore to the surface. The sulphur in many mines is still carried to the surface on the backs of boys called "carusi," of whom there are about 3,500.

**BORACIC ACID**, a product of the vapour-springs of Monte Cerboli and other localities in the communes of Pomeranci and Castelnuovo in the Tuscan Maremma. About 2,680 tons, worth 800 lire per ton, are produced annually, and nearly all is exported to England. This industry was established at Monte Cerboli, in 1827, by M. Lardarel, and has since spread to neighbouring localities, where new vapour-springs (soffioni) have been found by boring. The boracic acid is condensed by conducting the hot vapours through water contained in basins called "lagoni." The works of the Lardarel family are well arranged, and charitable institutions have been founded by the proprietors for the benefit of the hands employed. Some 400 persons are engaged in this industry.

**CHEMICAL PRODUCTS OF MINERAL ORIGIN.**—Of these there are annually manufactured in Italy some 13,000 tons of sulphuric acid, 2,200 tons of hydrochloric acid, 850 tons of nitric acid, 1,900 tons of sulphate of soda and 14,000 tons of carbonate of soda. 1,700 tons of nitric salts, 4,500 tons of alum, 1,866 tons of sulphate of iron and copper, 1,600 tons carbonate of lead and minium, 5,500 tons of superphosphates, 1,500 tons of ammonia, and 200 tons of sulphide of carbon, representing a total value of about 10,500,000 lire.

### HOMŒOPATHIC PRESCRIPTIONS.

THE following specimens of the various forms of homœopathic prescribing have been written for us by an eminent homœopathic physician. They comprise all varieties of prescriptions likely to be met with from English homœopathic practitioners, and a very few words will suffice to make clear any possible difficulties which might present themselves to a dispenser not previously familiar with such prescriptions.

It is not necessary to give *facsimile* specimens, as the average caligraphy of the homœopathic prescribers is above that of their allopathic rivals, and directions are always written in English.

The Greek  $\theta$  indicates the matrix tincture, and the number immediately following the name of the medicine ordered indicates the dilution. If an  $x$  be added, the decimal scale of dilution is intended; in all other cases the centesimal scale is understood.

#### Mixtures.

Tinct. nucis vom. 3x .. .. .	℞ij.
Aque destill. .. .. .	℥ij.
Ft. m. Direct a dessertspoonful to be taken every six hours.	
Tinct. bryoniæ alb. $\theta$ .. .. .	℞ij.
Aque dest. .. .. .	℥ij.
Ft. m. Direct a dessertspoonful to be taken every three hours.	

#### Powders.

It is usual to wrap each powder separately in tinfoil over the white paper.

Trit. mercurii sol. 3x .. .. . gr.  $\frac{1}{2}$   
Mitte tales chart. xij. Direct a powder to be taken dry on the tongue every four hours.

Tinct. pulsat 6 .. .. . ℞vj.  
Sacch. lactis .. .. . q.s.  
Ft. pulv. Direct this powder to be dissolved in six tablespoonfuls of water, and a tablespoonful to be taken every morning and evening.

Glob. Ignatie 6 .. .. . iij.  
Sacch. lactis .. .. . q.s.  
Ft. pulv. Mitte tales, xij. Direct a powder to be taken every four hours.

#### Pilules.

Pil. sulph. 12 .. .. . xxiv.  
Direct two pilules to be taken every morning and evening.

#### Applications.

Tinct. arnicæ  $\theta$  .. .. . 3ss.  
Aque destill. .. .. . 3viij.  
Ft. lotio.

Label.—For external application.

Direct a piece of lint in three folds to be soaked in the lotion, applied to the bruise, and covered with oiled silk.

Linim. rhns .. .. . ℥ij.  
Linim. saponis simplicis .. .. . 3iv.  
Ft. linimentum.

Label.—For external application.

Direct to be gently rubbed into the joint every four hours.

In prescribing pilules and globules some practitioners write their directions as follows:—

Pil. chamomille .. .. .	3/12
Direct a pilule to be taken every three hours.	
Glob. belladonnæ .. .. .	6/6
Sacch. lactis .. .. .	q.s.

Ft. pulv. Direct to be dissolved in three tablespoonfuls of water, and a tablespoonful to be taken every six hours.

In the first of these prescriptions 12 pilules of chamomillæ are ordered. These would, of course, be dispensed in a bottle. In the second six globules of belladonna 6 are to be rubbed down with about 30 grains of sugar of milk. In both cases the centesimal dilutions are intended.

### FRENCH TOILET ARTICLES.

THE "Comité Consultatif d'Hygiène" of France urges on the Minister of Agriculture and Commerce that toilet compounds containing poisons should be subject to the same regulations both as to manufacture and sale as pharmaceutical products and medicinal compounds. Their proposal is not yet adopted, but they think that meantime it is desirable that the greatest possible publicity should be given to the analyses of certain of the most popular compounds which they have drawn up. The following analyses, given on the authority of the committee, are published in the June number of the *Journal de Pharmacie et de Chimie*:—

#### Eau Figaro.

An ammoniacal solution of nitrate of silver.

#### Eau de Serpent for the Hair.

	Grammes
Sulphate of copper ..	2.85
Nitrate of silver ..	43.33
Ammonia ..	12.75

#### Poudre de Riz.

	Per Cent.
French chalk ..	42.30
Rice ..	46.29

#### Eau de Rochers.

##### Solution No. 1.

Nitrate of silver ..	3.836
Sulphate of copper ..	0.010
Ammonia ..	1.665

##### Solution No. 2.

Sulphide of sodium	6.67
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#### Eau de Castille.

Hyposulphite of soda ..	10.16
Acetate of lead ..	1.667

#### Eau des Fées.

Oxide of lead ..	0.213
Hyposulphite of soda ..	5.456
Glycerine ..	1.351
Ammonia ..	0.391
Water ..	92.583

#### Eau Charbonnière.

##### Solution No. 1.

Acid gallic ..	—
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##### Solution No. 2.

Nitrate of silver ..	1.936
Sulphate of copper ..	0.088
Ammonia ..	1.088

#### Lait Antiphélique, Candés.

Bichloride of mercury, or 5-2 per cent. of oxide of mercury.

#### Eau Allen.

Glycerine ..	2.98
Oxide of lead ..	16.41

#### Eau de Ninon.

Calomel or Calomel water (?) ..	48.9
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#### Epilaine.

Sulphuret of sodium	9.45
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#### Nuancine.

Glycerine ..	36.00
Oxide of lead ..	8.83
Hyposulphite of soda	(?)

#### Eau Magique.

Oxide of lead ..	9.78
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#### Sicilian Hair Renewer (Holt) [sic].

Glycerine ..	(?)
Oxide of lead ..	12.80

#### Eau Lemoine.

Glycerine ..	—
Oxide of lead ..	11.55

#### Teinture pour Cheveux.

Glycerine ..	—
Nitrate of silver ..	9.35

#### Teinture Rafin.

Nitrate of silver ..	49.8
Ammonia ..	28.00

#### Fleur de Riz.

French chalk, powdered maize, and a little zinc.

#### Fard Rouge.

French chalk coloured with carmin and safflower.

#### Eau de Visites.

##### Solution 1.

Acid gallic ..	—
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##### Solution 2.

Sulphate of copper ..	2.10
Nitrate of silver ..	6.15
Ammonia ..	4.30

#### Eau de Lys.

White matter in emulsion in water 50 per cent., consisting almost entirely of protocloride of mercury; and 1 per cent. of matter in solution.

#### Eau de Berenice.

Oxide of lead ..	4.97
Glycerine ..	—
Hyposulphite of soda	—

**WASTE NOTHING.**—A Spanish magistrate lately issued this proclamation, "All articles in the shape of wines, groceries, and provisions, which, upon examination and analysis, are proved to be injurious to health, will be confiscated forthwith and distributed to the different charitable institutions."



## THE NEW GERMAN PHARMACOPŒIA.

## (FINAL NOTICE.)

GALENICAL PREPARATIONS (*continued*).

**LINIMENTA.**—The formulæ of the camphorated and plain ammoniated liniments have been slightly modified, 1 part of poppy-seed oil being used with 3 of camphorated or olive oil as the case may be; these, with 1 part of ammonia solution, form compounds less liable to separation than their former representatives. Lin. sapo. amm. is omitted, and the camphorated liniments of soap (opodeldoch) have been altered as regards the soap used, and by the addition of 5 per cent. of glycerine to plain opodeldoch. A turpentine liniment has been added consisting of pearl-ash 6 parts, soft soap 54 parts, and turpentine 40 parts.

**LIQUORES.**—Considerable change has been effected in this class, the number of solutions having been reduced from twenty-two to sixteen by ten omissions and four additions. Of the old preparations retained the following have been altered:—

**Liq. Ferri Sesquichlor.**—A process similar to our own is now given, and the specific gravity reduced from 1.480 to 1.280, thus being equivalent to 10 per cent. of iron.

**Liq. Kali Cautiei.**—Reduced from sp. gr. 1.330 to 1.142, equalling 5 per cent. of KHO. Soda solution has been similarly changed. One good effect of this is that the solutions are of normal strength, and are thus available for volumetric use.

**Liq. Kali Arsenicosi** (Fowler's Solution).—Spt. melissæ co. has been added as a flavouring agent, and the strength reduced to 1 in 100 (by weight).

The new solutions are: Liq. alumin. acet., liq. corrosivus, liq. ferri oxychlorat., and liq. natrii silicii.

**Liq. ferri oxychlorat.** (which is dispensed for "dialysed iron") is prepared from liq. ferri sesquichlor. (35 parts) by precipitation with liq. ammon. (35 parts), both largely diluted with water; the precipitate washed, pressed, and then digested for three days in 3 parts hydrochloric acid. The resulting solution is diluted to sp. gr. 1.050, and contains 3.5 per cent. of iron.

Very explicit characters and tests are appended to most of the preparations.

**PULVERES.**—Pulv. aromat. has been removed along with three others. The only alteration is in pulv. ipecac. opiat. (Dover's powder), which in the former edition was identical with the British formula. Milk sugar is now substituted for sulphate of potash. The change has presumably been made with the intention of ensuring more thorough comminution of the active ingredients, and so far is commendable.

A formula for Carlsbad salts (artificial) is given, which is as follows:—

	Part-
Dried sulphate of soda .. .. .	41
Sulphate of potash .. .. .	2
Chloride of sodium .. .. .	18
Bicarbonate of soda .. .. .	36

Reduced to fine powder and mixed. Six grammes of this in one litre of water resembles Carlsbad water.

The number of Spirits has been decreased, and the directions for the preparation of those remaining revised. In spiritus formicarum, formic acid is substituted for "recently-collected ants," but the name is unaltered.

**SYRUP.**—In the general directions for preparation a paragraph has been added directing a sufficient quantity of water to be added to the syrup after filtration, in order to bring up to the weight indicated in each formula. This provision was formerly neglected.

**TINCTURÆ.**—Fully a third of the old preparations have been discarded, the more noteworthy being tr. belladonnæ, formicarum, guaiaci (ammoniated and simple), iodi decolor., kino, secalis cornuti.

The general directions are practically the same as before, namely, a week's maceration, straining the tincture from the marc (and when necessary pressing out any fluid remaining

in the latter) and filtering, care being taken during filtration that evaporation is prevented. There are many drugs, such as aloes, asafoetida, benzoin, and the like, to which this process is peculiarly applicable, the greater portion of the drug being soluble in the menstruum. But there are other drugs, such as aconite, cinchona, gentian, and ginger, which retain a considerable portion of the saturated, or partially saturated, menstruum, even after considerable pressure. This fact is brought home to us in our compound method of maceration and percolation, in which we keep back a portion of the menstruum for final treatment of the marc; while the most advanced of us are looking forward to displacement being added to percolation, so that we may approach perfection as far as possible. The meaning of all this is, first, *exhaustion of drug*; second, *utilisation of spirit*; and third, *relation of product to drug as regards strength*. Without repeating here what we said in our last notice regarding exhaustion, we may merely remark that the conditions stated are not fulfilled in all cases by simple maceration (as in the German process). It would have been better, therefore, to make some sufficiently reasonable modifications. The proportion of drug to menstruum is in accordance with the rule of decimal parts, being 1 to 5, 1 to 10, and so on. The menstrua are spiritus ('830), spiritus dilutus ('892), and in the case of tinct. opii crocata and opii simplex equal parts of dilute spirit and water. There are other tinctures (such as the ethereal) which have menstrua peculiar to themselves.

**UNGUENTA.**—To this class of preparations a paragraph of general directions is now prefixed. In this rules are laid down which are not uncommonly neglected in making ointments, and they are calculated to ensure homogeneous preparations.

The number of formulæ has been reduced from 40 to 19. The introduction of ung. paraffini has enabled the revisers to replace with it less satisfactory bases of six ointments, as in ung. kali iodati, where it takes the place of lard, the use of sodic hyposulphite to prevent coloration being dispensed with. The basis is made of solid paraffin one part, liquid paraffin four parts; melted with heat and stirred constantly until cold. It should be white, and should liquefy between 35° and 40° C. It is harder than its ordinary commercial representatives, and merely softens on application to the body—properties which in many instances will be advantageous; although its partially-crystalline nature appears objectionable, we have noticed that the crystals disappear between the temperatures indicated. Olive oil takes the place of linseed oil in the formula for ung. diachylon. The resulting ointment is much better than the former one, and does not tend to be so granular. In glycerine ointment tragacanth takes the place of starch as the gelatinising medium, and in ung. zinci lard replaces ung. rosatum.

**VINA.**—The only wine omitted is vin. aromat. Several of the formulæ have undergone alteration, the most noteworthy being vin. pepsin, of which the formula is now as follows:—

	Parts
Pepsin .. .. .	50
Glycerine .. .. .	50
Water .. .. .	50

Mixed, and macerated for six days, with frequent agitation, in

	Parts
White wine .. .. .	1,845
Hydrochloric acid .. .. .	5

And filtered.

This method is much more convenient, and the preparation more elegant, than the former one, which was prepared from the mucus of the fresh stomach.

The Wines conclude the series of Galenical preparations. Independent of those matters which we have referred to as elements of weakness, it will be noted that generally there is a marked improvement in this department: many of the old unscientific preparations have been discarded, while a number of those retained have been corrected or modernised. In contrast, therefore, with the pharmacy of last edition that of the present is superior.

**TEXT DESCRIPTIVE OF DRUGS AND CHEMICALS.**—We have already referred to this as being re-written to a great extent;

indeed, the greater part of the improvements effected by the Council of Revision has been done in this department. We cannot in this review enter into a minute analysis of the data and facts given, but shall indicate the nature of the changes by several typical examples of organic and inorganic substances.

*Cortex Chinae*.—The source of the bark is first stated, namely, branch and stem bark of cultivated cinchonas, particularly *C. succirubra*. Then follow the physical characteristics—frequently in quills (*tubos*) about 6 decimetres long, 1 to 4 centimetres in diameter and from 2 to 4 millimetres thick, also in half quills of similar proportions. Pears a thin corky layer, brownish, corrugated longitudinally, minutely fissured transversely, the inner portion being reddish brown and fibrous, showing, microscopically, the lily fibres peculiar to cinchona. A decigramme of the bark emits a purple-coloured tar when heated in a test-tube. Following this concise description is a long paragraph descriptive of the assaying process, which we may give briefly as follows:—Powdered bark, 20; ammonia solution, 10; spirit, 20; and ether 170 grammes; macerated for a day, and 120 grammes of the clear solution decanted, 3 c.c. of normal HCl added thereto, the ether driven off, HCl added to acidity, filtered, and the alkaloids precipitated by potash, washed until free from alkali, and carefully dried. The residue should weigh not less than 0.42 gramme. It will be seen that the weight of alkaloids obtained represents six-tenths of that contained in the amount of bark taken. That is 3.5 per cent. of total alkaloids as a minimum. The Thallioquin test completes the description. The description in the former edition was meagre in comparison to this: three kinds of bark were official, namely, *C. Calisaya*, *C. micrantha*, and *C. succirubra*, the origin and characteristics of the barks being chiefly referred to, and only in the case of *C. calisaya* was the alkaloidal percentage spoken of, although no assaying process was given. Again, in such drugs as ipecacuanha and jalap, where the activity depends upon a known principle, tests are given to ensure the presence of such, and in many cases easy methods of estimation appended. The means for the detection of adulterations and sophistications have also been greatly augmented. Thus in the case of balsamum copaive the better part of a page is devoted to its characters and tests. In the former edition a few lines only were devoted to this purpose, turpentine being the only adulteration looked for. The specific gravity is now stated, and tests given for the detection of such adulterants as Gurjun balsam.

Over the whole range of materia medica similar attention has been given to these features, so that the principal requirements of pharmacology have been fulfilled.

Equal care has been exercised in rendering the description of chemicals scientifically exact. Adhering to the principle of the first edition, manufacturing processes are given only for those chemicals which are restricted in their use to medicine, and which it is convenient for the pharmacist, as dispenser, to prepare. The formulæ of such have been carefully revised, and modified in several instances. The extension of the text lies chiefly in the tests and estimation processes. Thus, in the last edition, under "*Ferrum Carbonicum Saccharatum*," there were given the process, description of physical characteristics, tests for presence of carbonic and absence of sulphuric acid, and the percentage of iron (as carbonate) present. No tests were given for iron, except the chalybeate taste, nor was an estimation process. These are now supplied, the base being allowed to be ferrous-ferrie, so that the estimation process is adapted to this condition. For this purpose the salt is dissolved in hydrochloric acid and oxidised by chlorate of potash, care being taken to have all the iron in the ferric state and no chlorine present. Iodide of potassium is added,\* and the amount of free iodine estimated by hyposulphite of soda solution.

Similarly in connection with all chemicals there is abundant evidence to show that the intention of the Council has been to fix reasonable standards of purity and strength, and to give these in concise terms and easily-applicable methods. The number of reagents has not been increased, but, as we have already remarked, a number of volumetric solutions have been introduced. These, as giving an idea of

the extent to which work in this department may be carried, are quoted:—

#### Volumetric Solutions.

Normal	Decinormal	Centinormal
HCl .. ..	AgNO <sub>3</sub> .. ..	KBrO <sub>3</sub> .. ..
KHO .. ..	I .. ..	— .. ..
— .. ..	NaCl .. ..	— .. ..
— .. ..	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> .5H <sub>2</sub> O .. ..	— .. ..

In addition to these there are starch solution and solutions of potassic bromide and permanganate of varied strengths. To the solutions there are not appended tables of substances to which they are volumetrically applicable, such as we have in our own Pharmacopœia. The solutions used as indicators are included in this group, and are sol. phenolphthalein (1 in 100 dilute spirit) and tr. cocci.

There is a number of salts and solutions to which volumetric estimation might be applied, but we have no doubt that after a full trial has been given to the innovation it will be beneficially extended.

### THE UNITED STATES PHARMACOPŒIA.

#### (CONCLUDING NOTICE.)

TWO Oleates only have been made official in the present Pharmacopœia, namely, Oleate of Mercury (*Oleatum hydrargyri*), made by digesting *ten parts* of yellow oxide of mercury thoroughly dried in *ninety parts* oleic acid at a temperature not exceeding 74° C. (165.2° F.), and Oleate of Veratrine (*Oleatum veratrinæ*), made by rubbing *two parts* veratrine in a warm mortar with *ninety-eight parts* oleic acid, and afterwards heating in a porcelain capsule on a water-bath, and stirring until dissolved.

In Oleoresins there are no changes, unless in nomenclature. Oleoresina Filicis, for example, has been changed to Oleoresina Aspidii, and Oleoresina Lupulinæ to Oleoresina Lupulini.

Under the general title of Olea (Oils) are classified all oils, whether compound, as *Oleum Etherum* and *Phosphoratum*, or fixed, as *Oleum Adipis* and *Olivæ*, or volatile, as *Oleum Anisi* and *Succini*; in other words, all oils by whatever process obtained. There have been additions made, numbering twelve in all, while five of the old oils have been deleted. It is unnecessary to enter into any detail regarding the changes in this section, more particularly as the additions are generally of oils well known and the deletions timely. Phosphorated oil is one of the new additions, and we mention it because it contains two features in its preparation distinguishing it from the B.P. oil, namely, exposing the almond oil for fifteen minutes to a temperature of 482° F., instead of 300° F., previous to dissolving the phosphorus, and the addition of 1 part in 10 of stronger ether to the phosphorated oil.

The minimum strength of Opiums has been increased, while a maximum has also been fixed to the official preparations. Opium in its normal moist condition is required to yield not less than 9 per cent. of morphine, while powdered opium from which the official preparations are made is required to yield not less than 12 nor more than 16 per cent. of morphine. Denarcotised opium, made official for the first time, is prepared from opium containing 14 per cent. morphine, and the proper quantity to graduate the strength is made up at the conclusion of the process with sufficient sugar of milk. We give no opinion as to the advantages gained in this preparation compared with its costliness, but we give the process for denarcotising the opium in full:—

Opium Denarcotisatum (Denarcotised Opium).—

	Parts
Powdered opium, containing 14 per cent. of morphine, <i>one hundred parts</i> .. ..	100
Stronger ether, <i>one thousand parts</i> .. ..	1,000
Sugar of milk in fine powder, <i>a sufficient quantity to make one hundred parts</i> .. ..	100

Macerate the powdered opium with *five hundred* (500) *parts* of stronger ether in a well-closed flask for twenty-four hours, agitating from time to time. Pour off the clear ethereal solution and repeat the maceration with two other portions of the ether, each of *two hundred and fifty* (250) *parts*, first for twelve hours and the last time for two hours. Collect the residue in a weighed dish, dry it, first by a very

\* The following reaction takes place:  $\text{Fe}_2\text{Cl}_6 + 2\text{KI} = 2\text{FeCl}_2 + 2\text{KI} + \text{I}_2$ .



gentle heat, and finally at a temperature not above 85° C. (185° F.), and mix it thoroughly by trituration with enough sugar of milk to make the product weigh *one hundred* (100) *parts*.

The changes in Pills are so insignificant that they scarcely require notice. Three of the formulæ of the old Pharmacopœia have been removed from the list of Pilulæ and entered under the new title *Massa*, namely, Pilulæ Copaibæ, now *Massa Copaibæ*; Pilula Fr Ferri Carbonatis, now *Massa Ferri Carbonatis*; and Pilulæ Hydrargyri, now *Massa Hydrargyri*. As the formula for phosphorus pills of our own Pharmacopœia has been somewhat freely criticised, we subjoin the formula, with directions, which have here found acceptance:—

**Pilulæ Phosphori (Pills of Phosphorus).—**

Phosphorus .. .. .	One grain
Althæa in No. 60 powder .. .. .	Eighty grains
Acacia in fine powder .. .. .	Twenty grains
Glycerine .. .. .	Forty grains
Water .. .. .	Twenty grains
Purified chloroform .. .. .	Fifty grains
Balsam of tolu and stronger ether, each a sufficient quantity to make <i>one hundred pills</i>	

Dissolve the phosphorus in the chloroform in a test-tube. Mix the althæa and the acacia in a mortar with the pestle, add the solution of phosphorus, then the glycerine and the water, and quickly form a mass to be divided into *one hundred* (100) *pills*.

Dissolve *one* (1) *part* of Balsam of tolu in *one* (1) *part* of stronger ether, shake the pills with a sufficient quantity of the solution until they are uniformly coated, and put them on a plate to dry, occasionally stirring until the drying is completed.

In Powders there are five new introductions, namely, Pulvis Antimonialis (James' Powder) after the British Pharmacopœia formula; Pulvis Cretæ Compositus, introduced to make an extemporaneous chalk mixture; Pulvis Glycyrrhizæ Compositus after the Prussian Ph.; and Pulvis Morphinæ Compositus (Tully's Powder). As this last has been thought of sufficient importance to justify its insertion we give the formula in full.

Pulvis Morphinæ Compositus (Compound Powder of Morphine). (Tully's Powder).—

Sulphate of morphine .. .. .	One part
Camphor .. .. .	Twenty parts
Glycyrrhiza in No. 60 powder .. .. .	Twenty parts
Precipitated carbonate of calcium .. .. .	Twenty parts
Alcohol .. .. .	A sufficient quantity

Rub the camphor with a little alcohol, and afterwards with the glycyrrhiza and precipitated carbonate of calcium until a uniform powder is produced. Then rub the sulphate of morphine with this powder, gradually added until the whole is thoroughly mixed. Pulvis Aloes et Canelle and Pulveres Effervescentes have been deleted, while in Dover's Powder (Pulvis ipecacuanhæ et opii) sugar of milk has been substituted for sulphate of potassium. Resin of Copaiba has been added to the official resins of the old Pharmacopœia. It is described as the "residue left after distilling off the volatile oil from copaiba." A yellowish or brownish-yellow brittle resin of a weak odour and taste of copaiba and an acid reaction, soluble in alcohol, benzol, or amylie alcohol. Resin of scammony is still directed to be prepared by the needlessly-expensive process of digesting the gum resin with alcohol instead of the root, as directed in the British Pharmacopœia.

No change of importance has been made on the official Spirits. Spirits of anise, cinnamon, peppermint, and spearmint have all been raised, and spirit of camphor reduced to a uniform strength of 10 per cent. The old process (Redwood's) for preparing the spirit of nitrous ether has been rejected, and, as the change will probably provoke some criticism, we give the present process in full:—

"*Spiritus Ætheris Nitrosi* (*Spirit of Nitrous Ether*):—Nitric acid, *nine parts*; sulphuric acid, *seven parts*; alcohol, distilled water, each a *sufficient quantity*. Add the sulphuric acid gradually to *thirty-one* (31) *parts* of alcohol. When the mixture has cooled transfer it to a tubulated retort connected with a well-cooled condenser, to which a receiver, surrounded by broken ice, is connected, air-tight, and which is further con-

nected by means of a glass tube with a small vial containing water, the end of the tube dipping into the latter. Now add the nitric acid to the contents of the retort, and having introduced a thermometer through the tubulure, heat rapidly by means of a water-bath, until strong reaction occurs and the temperature reaches 80° C. (176° F.). Continue the distillation at that temperature and not exceeding 82° C. (180° F.) until the reaction ceases. Disconnect the receiver, and immediately pour the distillate into a flask containing sixteen (16) parts of ice-cold distilled water. Close the flask and agitate the contents repeatedly, keeping down the temperature by immersing the flask occasionally in ice-water. Then separate the ethereal layer, and mix it immediately with nineteen times its weight of alcohol. It should contain 5 per cent. of the crude ether." The construction of some of the foregoing sentences is a study, and prompts the suggestion that the Revision Committee might well improve their English as well as their processes.

All Suppositories have been dismissed the Pharmacopœia, and the following general directions substituted.

"Suppositoria (Suppositories):—

"Suppositories are to be prepared by the following formula:—

"Mix the medicinal portion (previously brought to a proper consistence if necessary) with a small quantity of oil of rheobroma, by rubbing them together, and add the mixture to the remainder of the oil of theobroma, previously melted and cooled to the temperature of 35° C. (95° F.). Then mix thoroughly without applying more heat, and immediately pour the mixture into suitable moulds. The moulds must be kept cold by being placed on ice, or by immersion in ice-cold water, and the inner surface of the moulds should be carefully freed from adhering moisture before the melted mass is poured in. In the absence of suitable moulds, suppositories may be formed by allowing the mixture prepared as above to cool, care being taken to keep the ingredients well mixed, and dividing it into parts of a definite weight each, which may be made into a conical or other convenient form for a suppository. Unless otherwise specified, suppositories shall be made to weigh about *fifteen* (15) *grains* or *one* (1) *gramme*."

In Syrups there have been very considerable additions, so that the total number is now raised from twenty-three to thirty-four. In the British Pharmacopœia there are seventeen official syrups, and of this number six have not been thought worthy of recognition, so that we have here twenty-three foreign to our own Pharmacopœia. The density of two only of the syrups is given, viz. Syrup and Syrup of Hydriodic Acid, but, calculating in other cases from the proportions of the ingredients used, we find that in almost every instance the density is lower than that of our own Pharmacopœia in a ratio nearly corresponding with that of simple syrup where the density is 1.310 as against 1.330. In making syrup (simple) the temperature is directed to be raised to the boiling-point, and the syrup strained while hot, and this is of advantage, since the higher temperature is favourable for the separation of foreign substances which otherwise might remain in solution. In the case of syrup of squill, on the other hand, the vinegar of squill is directed to be brought to the boiling-point and filtered while hot, and the sugar afterwards added and dissolved by agitation without heat. A sensible change has also been introduced in the preparing of syrup of tolu, in digesting the balsam with the sugar and water, as the sugar helps solution of the aromatic principles contained in the balsam. The temperature is not to exceed 82° C. (180° F.), and is to be sustained for two hours. Of the new introductions the formulæ for several, such as Syrup of Lactophosphate of Calcium and Syrup of Hypophosphites, &c., have already appeared in our pages, while in the case of others, such as Syrup of Lime and Syrup of Raspberry, &c., it will be unnecessary, we think, to give them in detail. Of the remainder, it may shortly be noted that a useful hint may be taken from the formula for the Syrup of Hydriodic Acid, and appended to the working formula which appeared some time since in our pages, in dissolving the iodine in alcohol previous to passing the hydrosulphuric acid gas through the solution. The alcohol is driven off by heat along with excess of hydrosulphuric acid gas after the process of decomposition is completed. Syrup of bromide of iron is made to correspond in every

respect with syrup of iodide of iron, while Easton's Syrup is made from the phosphate of iron referred to in a previous article.

Passing Tinctures for the present—for reasons similar to those we gave under Extracts—we come to Triturations (Triturations), for which the following formula and directions are given:—

Take of—

The substance .. .. .	ten parts
Sugar of milk in moderately-fine powder ..	ninety parts
To make one hundred parts.	

Weigh the substance and sugar of milk separately; then place the substance, previously reduced if necessary, to a moderately-fine powder in a mortar; add about an equal bulk of sugar of milk, mix well by means of a spatula, and triturate them thoroughly together. Add fresh portions of the sugar of milk from time to time until the whole is added, and continue the trituration until the substance is intimately mixed with the sugar of milk and finely comminuted. The directions here are painfully minute, and, moreover, are not remarkable for their clearness. They might well have been cut down to those given under "Trituration of Elaterin," which immediately follows, and which, we presume, has been added by way of example—Mix thoroughly by trituration.

In Lozenges (Trochi-ci) we have Troches of Chloride of Ammonium, of Catechu, and of Krameria made officinal; while Troches of Iron (Hydrated oxide) have been substituted for Subcarbonate, and Santonate of Sodium for Santonin. We do not think it necessary to give the formula for any of these preparations.

The number of Ointments have been reduced from twenty-nine to twenty-six, but this only imperfectly represents the changes which have taken place in this department. There have been five new ointments added, while eight have been deleted, and all the ointments have been made of the uniform strength of 10 per cent. where this was at all admissible. This strength, for example, applies to the following ointments:—Carbolic acid, gallic acid, tannic acid, belladonna (aleoholic extract), chrysarobin, gall, ammoniated mercury, yellow oxide of mercury, red oxide of mercury, iodoform, carbonate of lead, iodide of lead, and stramonium (extract). Of the foregoing, carbolic acid and yellow oxide of mercury are alone directed to be made with ointment (simple ointment); all the others are made with benzoinated lard. In the case of Citrine Ointment, lard oil has been substituted for lard, and in Ointment of Iodide of Potassium 1 per cent. of hyposulphite of sodium (instead of the carbonate of potassium of the B.P.) has been added to recombine the iodine, which is gradually liberated. Notwithstanding the popularity of vaseline (petrolatum), it is to be remarked that it does not enter into any of the twenty-six ointments officinal in the present Pharmacopœia.

The nomenclature of Vinum Xerictum and Vinum Portense has been changed back in both instances to that of the 1850 Pharmacopœia—viz., Vinum Album and Vinum Rubrum. Of the former two strengths are now recognised—Vinum Album, containing not less than 10 per cent., nor more than 12 per cent., by weight, of absolute alcohol; and Vinum Album Fortius, fortified with 1 part (0·820) alcohol to 7 vinum album. This last should contain not less than 20 per cent., nor more than 25 per cent., by weight, of absolute alcohol. All the official wines are directed to be prepared with this last sherry, and to the wines of the old Pharmacopœia have been added Aromatic Wine, Bitter Wine of Iron, and Wine of Citrate of Iron. None of these are of any importance; nor do we find any changes in this department of sufficient consequence to demand any notice.

A MODERN MIRACLE.—The *New Orleans Picayune* says that a medical man in New Orleans, who is fond of his little joke, called on a coloured minister, and began to catechise him. "Why is it," said he, "that you are not able to do the miracles that the apostles did? They were protected against all poisons and all kinds of perils. How is it that you are not protected now in the same way?" The coloured preacher responded promptly: "Don't you know about that, doctor? I spect I is. I've taken a mighty sight of strong medicine from you, doctor, and I is alive yet."

## PALATABLE DRUGS FOR CHILDREN.

DR. FREDERICK CHURCHILL, surgeon to the Victoria Hospital for Children, writes a lively article in the *British Medical Journal*, in which he points out the necessity of swimming with the tide in reference to children's medicines. Children of this enlightened age, he says, are far more pampered and spoilt than those of the previous generation. Besides there is often more harm done to a child's nervous system, by cramming the draught down its throat, than all the good the nauseous drug was supposed to effect. Children will often take days to recover their equilibrium after a protracted encounter with the medicine-glass in the nursery, under the stern discipline of a would-be conscientious nurse.

Undoubtedly the ailments under which children for the most part suffer belong to the preventable class. They are due sometimes to overfeeding; very often to neglect, especially of the calls of nature; and very much to general bad management. With this view, it may be well to presume that the best and most approved mode of treatment for habitual torpidity of the bowels is not medicine, but an enema of soap and water, with occasionally a little castor or olive oil added to the injection. If this do not succeed, and the child's appetite begins to fail, it is an indication for administering medicine by the mouth.

Fortunately, the art of the apothecary comes in to our aid, and we are now enabled to give the most nauseous of drugs—castor-oil—absolutely free from taste and smell, while it retains the full aperient properties of ordinary castor-oil. Messrs. Allen & Hanburys themselves advise that it should be shaken up with three or four times its bulk of hot milk. The viscosity of the oil is thus avoided, and the emulsion produced is scarcely distinguishable from warm rich milk.

If it be desirable to administer an aperient that will act more directly on the liver, and to avoid the unpleasant effects which often arise after taking "oil," the compound rhubarb pill will be found a serviceable aperient. Of course, some new method for its administration will be desired, which I shall now detail. Either an ordinary five-grain pill may be cut-up, and a portion of it broken in small pieces may be buried in a chocolate-cream, which the youngest child will take with avidity; or for children of, say five years and upwards, I have given one-half and one-fourth of a grain of this pill, thinly coated. Half-a-dozen or so may be taken, like "hundreds and thousands," and washed down with milk or water.

The medicated fruit lozenges are very useful, e.g., tamar indien and laxora lozenges. Podophyllin is probably one of the active ingredients in these lozenges. Only a small portion of a lozenge must be given to a child. The objection found with these is that they sometimes "gripe" the little patient. Next to these, perhaps, in efficiency and palatability is the compound liquorice powder, containing senna powder. About a teaspoonful stirred up with warm milk may be taken at bedtime, and a little chloric ether added (about ten to twenty drops). Very few children will object to take fluid magnesia or the calcined magnesia, especially if flavoured with the syrup of mulberry or orange.

I have succeeded in masking the taste of many powders by the addition of powdered "rose" lozenges. I very seldom prescribe Gregory's powder, on account of its nauseous character and bulk. I prefer to combine the rhubarb with bicarbonate of soda, about five grains of each. This makes a much more miscible and manageable powder. Given in jam, honey, or golden syrup, the taste is altogether covered.

Children will sometimes take the "baume de vie," or decoction of aloes, without objecting much. A little of this rubbed into the stomach of infants will suffice sometimes to procure an action of the bowels. The extract of liquorice may be added to the decoction until the bitter taste is sufficiently masked. Children have not really such an aversion to it, for I have known them to lick off the aloes from their fingers when put on to prevent them from sucking them. Powdered aloes, about half a teaspoonful, may be given mixed with brown sugar. The electuary of senna is taken without difficulty by some children, also the syrup of senna and the infusion with prunes. The effervescent purgative



lemonade is a very agreeable drink, as also half a seidlitz-powder flavoured with lemon-juice.

Turning now to febrifuge mixtures, there is not much need of flavouring to mask the flavour of these. Sweet nitre, acetate of ammonia, spirits of chloroform, are all pleasant drugs to take. The nitrate and chlorate of potash are rather saltish, but the sal prunelle and Wyeth's compressed tablets will be taken by the bigger children without much protest. The syrups of orange, lemon, and mulberry will come in as agreeable and cooling adjuncts. Cough mixtures can generally be made very pleasant by the addition of syrup of squills, of tolu, &c.

As regards tonics, some considerable skill will be necessary efficiently to cover the bitter flavour. Children will take the saccharated carbonate of iron very well, and also steel wine; but if we attempt to give the bitter infusions, there is sure to be rebellion in the nursery. Quinine—one of the most valuable medicines for children—can be given without difficulty, either in the form of pill or, which I prefer, dissolved in syrup of orange, without the addition of any water. This effectually covers the flavour. Quinine wine is useful for the elder children.

Chemical food is, of course, taken with relish, and if recently made is a serviceable tonic; but the phosphates, from their insolubility, throw down very much. The compound solution of the hypophosphites, in ten-minim doses, and the hypophosphite wine, forms a perfect substitute for Parrish's food. Besides having iron in a form which is easily absorbed, the hypophosphite of magnesia serves as a useful antacid and stomachic in this combination.

With a view of putting into practical form these few suggestions, and to systematise the irregular but constant attempts of mothers to keep a little dispensary of their own, I have instructed Messrs. Savory & Moore to fit up a nursery medicine-chest, with a companion guide, to assist mothers, especially those residing in the colonies and far away from medical aid, to treat their own children in such emergencies.

#### PILL-MAKING IN PHARMACIES.\*

By M. J. AVERBECK, Ph.C.

**I**N the preparation of pills the question arises, Are pills a safe and eligible form of dispensing medicine?

This question is at present being considered by the best medical authorities in Europe; some Governments have even forbidden the sale or importation of the various coated or compressed pills, and although no definite conclusion has been offered, the majority agree on these points:

That pills have a local action upon the membranes of the stomach.

That substances of an irritant nature are not adapted to this form of preparation.

That, of whatever substances composed, pills should be readily soluble or disintegrated in the stomach.

That the various coated pills made by the manufacturers, on account of the drying they undergo in the process of coating, are often insoluble, and are very uncertain in their therapeutical effect; and that pills give more satisfactory results when prepared fresh by the competent pharmacist.

What conditions, then, are necessary to form a satisfactory pill? The ingredients should be thoroughly mixed; it should be readily soluble or disintegrated in the stomach; it should be moderate in size and permanent in form.

Excipients for pill masses are numerous, but their selection should be of such substances as will give the mass adhesiveness, solidity, porosity, and not allow it to become hard and dry in a short time.

Many persons in preparing pills make their first mistake in the selection of the excipient, thinking if they obtain a substance which will stick the mass together, they have obtained all that is necessary.

In this way the porosity and solubility is neglected.

Many of our formulæ contain sufficient resinous or gummy substances, such as aloes, asafœtida, gamboge, myrrh, &c., to make a mass by the simple addition of alcohol. Some of these formulæ also contain a sufficient quantity of fibrous

powder to give the mass porosity; but to such as do not contain it, the addition of a small quantity of finely-powdered ginger or elm will make a more satisfactory pill than the same mass prepared without such an addition.

Other formulæ contain sufficient of a solid extract to form a suitable mass. In such cases, the preparation is easily accomplished. When the mass does not contain sufficient adhesive substance, the excipient used should be as simple as practicable, and give the mass the proper condition.

Various excipients, prepared of glycerin and mucilaginous substances, give good results, and are extensively used. Glycerin is preferred to syrup or molasses for reason of its non-drying property. A good example is the *massa hydragryi*. I have seen a sample prepared with glycerin which made satisfactory pills after being exposed to the air a whole year.

A good excipient is jelly of tragacanth:—

	Part-
Tragacanth .. .. .	1
Glycerin .. .. .	2
Water .. .. .	2

Place the ingredients in a water-bath, heat for ten or fifteen minutes, and a clear jelly results.

This is a convenient form of excipient, and only a small quantity is sufficient to form a mass (about one part of jelly to four parts of material). I have made a few experiments to ascertain the amount of jelly of tragacanth, also the amount of excipient as recommended by the United States Pharmacopœia (1870) necessary to make a few of our official pills.

**Pil. Aloes and Ferri.**—To make 100 pills it required 170 grains of confection of rose and 90 grains of jelly of tragacanth. The latter made as good a mass, and rolled somewhat easier than the confection.

**Pil. Aloes and Myrrhæ.**—To make 100 pills it required 110 grains of syrup and 88 grains of excipient with jelly of tragacanth. The latter mass was much easier to roll, and the pills were superior to those made with syrup.

**Pil. Antimonii Comp.**—To make 100 pills it required 90 grains of molasses and 62 grains of excipient with jelly of tragacanth. The latter made a very good mass, and the pills were of better appearance than those made with molasses.

These experiments will show the adaptability of such an excipient to many substances which are prescribed in large bulk, and allow the addition of only a small quantity of excipient to form the mass. For masses containing calomel, subnitrate of bismuth, quinine, bromide of potassium, sulphate of iron, bicarb. of sodium, or many such unadhesive substances, the jelly of tragacanth makes a good recipient.

Sulphate of iron or other salts containing water of crystallisation should be carefully dried before being made into pills.

For quinine pills, the jelly, with a small quantity of tartaric acid, makes a very firm and presentable pill.

Sulphate of quinine .. .. .	grs. xij.
Tartaric acid .. .. .	gr. i.
Jelly of tragacanth .. .. .	grs. ij.

If the quinine is dry, one drop of glycerin should be added.

**For Camphor Pills.**—The jelly, with the addition of 10 per cent. of powdered althæa root, gives a pill that does not break down or run together, and is readily soluble. For a small quantity of essential oil, the jelly forms a good mass with a small quantity of a fibrous powder.

Such an excipient as a jelly of tragacanth, "always ready," commends itself for use in every pharmacy.

A large quantity of essential oil is readily made into mass by means of wax. Care should be taken that too much is not used, for in large quantity it hinders the solubility of the pill.

A convenient form for use is a solution (1 part of yellow wax to 5 parts of ether fortior). One or two drops of this solution is sufficient to make a dozen pills.

Warming the mortar and pestle, or slab and spatula, before mixing the ingredients, facilitates the working of the mass, and often requires less excipient.

**Pill Coating.** Coated pills may be prepared by the pharmacist, and with a little practice they will compare favourably with the manufacturer's product. The following simple process gives a good result:

\* From a thesis presented to the New York College of Pharmacy.—From the *Pharmaceutical Record*.

Ingredients used are French chalk or talc powder, and thin mucilage of gum Arabic (one part of gum Arabic to eight parts of water).

Apparatus needed: A flat-bottomed evaporating dish, capacity twelve ounces; two covered gallipots, one holding six, the other holding twelve ounces; and a pill-tray.

The pills should be perfectly round, and not too dry, so as to have a good shape when finished. Put the talc in the small gallipot, the pills and a sufficient quantity of the mucilage as will thoroughly moisten them in the evaporating dish; shake until well moistened, then turn them into the talc.

Shake until well covered with the talc, place them on the pill-tray to dry for a few moments, and finally turn them into the large gallipot, and shake so as to give them a gloss, and rub off the unnecessary powder.

Any number of pills, from six to 100, may be coated with this apparatus at one operation. For pills to be kept in stock, they should have a second coating, the same as the first.

The second coating should not be attempted before the first is thoroughly dry.

Every pharmacist should make all the pills necessary to be kept in stock, and should be prepared to make such as are liable to be prescribed. He should urge the sale of his own preparations, and prevent the necessity of keeping on hand a full stock of several manufacturers' products.

By making his own pills, the pharmacist will gain the confidence of both physician and patient; will know the accuracy and quality of the medicine dispensed, and will render a great service to his assistant by giving him the means of becoming proficient in this important branch of pharmaceutical education.

#### HAIR RESTORERS.

THE custom of dyeing the hair so as to change the colour bestowed by nature to one more favoured by fashion, or to conceal the appearance of white hair indicative of advancing years, is very ancient, and, so far as we can learn, belongs to every country and people, savage or civilised—with this difference: that, while the savage or semi-civilised have to content themselves to a great extent with those juices and extracts of vegetable origin which their limited observation has taught them possess colouring properties, their more favoured and cultivated brethren can call in all the aids of science and multiply almost indefinitely their dyeing agents. With the vegetable dyes, such as are derived from plants belonging to the genus *Indigifera*, or *Hibiscus*, or others which need not be mentioned, but which have been used in many countries from an early date for dyeing purposes, we do not at present purpose concerning ourselves. It will be sufficient for our paper if we confine ourselves to the several metallic dyes more generally in use in the present day, keeping in view more particularly their composition, mode of application, and chemical action. It is almost unnecessary to make any preliminary statement regarding the increase in the class of preparations known as hair dyes or restorers of recent years. That this increase has been the effect of any remarkable development of ingenuity in discovering new processes or new agents for the purpose either of dyeing or restoring the hair, notwithstanding that the knowledge of the art of dyeing, and the agents used in the process, have both increased, may well be doubted. More than a dozen years ago there was published in these columns an analysis of ten of the more widely advertised "Hair Restorers," and every one of the ten preparations contained *lead* in one form or another as the active ingredient of the "Restorer." Half-a-dozen years afterwards the *Lancet* revived the investigation, and out of twenty-one preparations, seventeen were found to contain lead. A careful examination of the new preparations introduced since then, together with a perusal of the whole literature of the subject, convince us that matters are still very much the same. This is the more astonishing, whether we consider the extent to which such preparations are now employed, or the risk attending the repeated use of a lead restorer, or the clearer knowledge in recent times of the principles of the art of dyeing, or the increased facilities for

carrying on the operation, or, above all, the capability of the hair beyond most substances of being acted upon by many chemical agents. Hair, from its very structure and composition, is susceptible to the majority of ordinary dyes used in colouring fabrics, as well as to many chemical agents that are not and cannot be applied to such purposes. It is, for example, not only porous, and therefore capable of being acted on by ordinary colouring agents, but it also contains a considerable proportion of sulphur, and is therefore capable of being effectively acted on by a majority of the metallic salts which cannot be considered in the ordinary acceptance of the term colouring agents. It is this last property that has brought the lead restorers so much into use. When a solution of a soluble lead salt such as acetate is applied to the hair a certain portion of it becomes absorbed, and darkens it in proportion to the amount of sulphur present in the hair; a black sulphide of lead being formed. Sulphur being always present in light-coloured hair in greater abundance than in dark, the conditions are favourable to the maximum effect being produced. Similarly soluble salts of mercury, silver, bismuth, gold, and other metals all produce the same result, the depth of colour obtained in each case being dependent upon the strength of the solution and the amount of sulphur present in the hair. A typical preparation of this class, and one which we know at one time had a very large sale as a proprietary article, consisted of 2 grains each perchloride of mercury and chloride of ammonium to the ounce of perfumed and coloured water. The preparation seemed to answer admirably all the purposes both of a wash and a restorer, and no inconsiderable number of certificates were obtained as to efficacy. We have no wish to puff the preparation in face of the Poison Act, but we confess we never heard of any more serious result from its use other than the deterioration of various trinkets not sufficiently protected from its influence. This preparation was in use long before Dr. McCall Anderson made his famous discovery of the new "and most perfect black dye for the hair which has been seen," consisting in the use, first of a solution of perchloride of mercury, and afterwards of a solution of hyposulphite of soda. The hyposulphite of soda in this instance is made to yield sulphur where, from deficiency of the natural product, the bichloride solution does not undergo decomposition sufficient to darken the hair. The decomposition is stated as follows:—Hyposulphurous acid being liberated from the soda decomposes into sulphurous acid and sulphur; the sulphurous acid in turn reduces the perchloride of mercury to the mercurous chloride, and the liberated sulphur converts this chloride into sulphide. Theoretically this may be correct enough, but practically anyone who has examined the changes which take place on the addition of a solution of perchloride of mercury to a solution of hyposulphite of soda, or *vice versa*, will have found that the conditions determining the changes are much more complicated than appears from the foregoing simple statement. If, for example, a solution of hyposulphite of soda, of 2 or 3 grains to the ounce of water, be added in equal proportions to a solution of perchloride of mercury of the same strength, a dense yellowish-white cloudiness will at once appear, changing more or less rapidly, according to exposure, to grey and finally black. If, however, the same strength of solutions be added to each other in the proportions of one part of hyposulphite to two or more parts of perchloride a pure white precipitate will be formed, more or less dense according to the excess of perchloride solution, and which darkens only slowly, and not to any great extent even on exposure to direct sunshine. On the other hand, if the solutions, still of the same strength, be reversed in the proportions in which they are mixed, that is to say two or more parts of hyposulphite of solution to one of perchloride, no apparent reaction will take place, the mixed solutions remaining quite clear, though slowly darkening on exposure. More of the solution in excess added to either of the mixtures does not affect them, but if the smallest crystal of either salt be dropped into the solution a change at once takes place. If a crystal of hyposulphite be dropped into the mixture with the white precipitate caused by excess of perchloride a dense black precipitate is at once obtained, while if a crystal of perchloride be added to the clear solution in which the hyposulphite is in excess the dense white and nearly permanent



precipitate is quickly formed. Without in the meantime entering into the chemistry of these phenomena we may point out that they clearly show the conditions necessary to a successful application of this restorer or dye. First, the hyposulphite solution should in strength be in excess of the perchloride solution; second, that the application of the perchloride solution should always precede the hyposulphite; and lastly, that the perchloride solution should be allowed to dry on and into the hair before the application of the second solution, so as to present the salt to the action of the hyposulphite in the form best adapted to produce the maximum results.

It is remarkable that nearly all the "lead" restorers of the present day, as in those analysed for THE CHEMIST AND DRUGGIST, as well as for the *Lancet*, are identical in nature. That is to say, they all contain a certain amount of lead in solution with sulphur and sulphate of calcium in suspension. This uniformity of composition either shows a sad want of ingenuity in striking out a new idea in the hair-restorer line or a melancholy example of following the multitude to do evil. We have never been quite able otherwise to account for the reason why the great majority of advertised preparations so faithfully adhere to the sulphur programme. It must either be added in the belief that it aids the natural product in the hair to effect decomposition of the lead salt, or it is added as a blind to cover the real nature of the mixture. In either case we consider the blunder unpardonable. Of a more scientific character are a few preparations in which the sulphur and lead are both presented in solution in the form of hyposulphite. Hyposulphite of lead is insoluble in water, but it is soluble in excess of hyposulphite of soda, so that if an ordinary solution of acetate or nitrate of lead be taken, and solution of hyposulphite of soda added until the precipitate first formed be dissolved, there is an exact reproduction of this class of restorers. They are altogether a more elegant class of preparations than the preceding. From absorption of oxygen on exposure to the air they are quickly decomposed into the dark-brown sulphide of lead; and they require special notice in this, that their true nature may not at once be discovered, seeing that they fail to give the characteristic reaction of lead with some of the more common reagents if the hyposulphite is in excess, such as dilute hydrochloric acid and iodide of potassium.

Still another preparation of this class was recently introduced (*Moniteur Scientifique* (3) XII., 880) in the direction of "compounding a metallic tincture that should have an innocuous metal for a basis instead of lead." This, shortly stated, consisted in making an ammoniacal solution of a tartro-bismuthic salt, and to this adding about an equal quantity by weight to the bismuth originally taken of hyposulphite of soda. This forms a colourless solution, which, upon exposure and evaporation, decomposes, depositing a sulphide of bismuth. It is perfectly harmless, but will probably never be very popular, owing to the slowness of its operation and from the fact that, even after long-continued use, it does not deepen the colour of the hair beyond a chestnut brown. Should anyone wish to try this restorer they may produce an equally good preparation, with less trouble, by simply making a dilute solution of the Pharmacopœia citrate of bismuth and ammonia solution, and adding to it hyposulphite of soda in excess of the bismuth. No reaction takes place on the addition of the hyposulphite, nor will any take place until the mixture is exposed, when, from loss of ammonia and the action of the atmosphere, it slowly deposits the sulphide of bismuth. It is almost unnecessary to point out here that with solutions of the majority of metallic salts, and with all those already mentioned, an instantaneous and energetic dye may be produced by applying a soluble sulphide—such as sulphide of ammonium or sulphide of potassium—to the hair after it has been sponged with the metallic solution. Two objections militate against this, however—namely, the disagreeable nature of the sulphide solution, and the necessity for the two solutions being sent out in separate bottles.

Silver salts, particularly the nitrate, have been used for a very long time as hair dyes, and are probably the best known and the most effective in producing an action on the hair, and will therefore always command a certain attention, notwithstanding one or two drawbacks to their use—such as staining the skin. A solution of nitrate of silver may be

used either plain or with solution of ammonia added in excess, or with a deoxidising agent, such as pyrogallie acid. When a simple solution of nitrate of silver is exposed to light in presence of any organic matter—such as animal tissues—it enters into combination with them quickly, forming insoluble black compounds. The change is not perfectly understood, but probably a black oxide of silver is produced, with partial reduction of the silver also to the metallic state. Such a solution, it will be understood, can readily be applied to the hair, but it will at once be seen that it will affect not only the hair, but also the skin, as well as every other organic substance in the shape of head-gear, coming into contact with it. This is one serious objection to the use of a simple solution of nitrate of silver. The ammonia solution of nitrate of silver meets the difficulty to a certain extent, but not altogether. It hastens the process of decomposition, and in this way lessens the risk, but it cannot quite prevent the action of the silver on the skin or other substances even where the greatest care is bestowed. When ammonia is added to a solution of nitrate of silver gradually, an olive-brown precipitate is formed of the protoxide of silver. This oxide is peculiarly susceptible to change on coming into contact with organic matter, but as it would be of little use in the dry state, and as it is almost insoluble in water, advantage is taken of its solubility in excess of ammonia to prepare a solution, not only, comparatively speaking, stable in itself, but which on exposure to the air and in contact with any organic substance quickly deposits the silver in the condition most susceptible to effect the decomposition necessary. We have, therefore, in the case of a simple solution of nitrate of silver, the salt slowly decomposing when applied to the hair into the black oxide with reduction of silver to the metallic state. With an ammonio-nitrate solution we have an oxide ready formed, and deposited on the hair with more speedy reduction of silver to the metallic state; while with the third method—namely, by using a reducing agent, such as pyrogallie acid, we have the decomposition effected almost at once. This may be illustrated very well by making solutions of each of the three preparations, and exposing a piece of porous paper to their influence in the open air. In the case of the simple solution the paper will be found to turn first slowly brown, and, more slowly still, black; in the case of the ammonio solution it quickly turns black, while with the last, immediately on adding the pyrogallie acid to the silver solution, an intense black is immediately struck. This rapid deoxidation of the silver solution under pyrogallie acid will explain why the two solutions require to be sent out in separate bottles, and forms one of the principal objections to the use of an otherwise serviceable preparation. Various strengths are suggested for all the three different preparations, from 20 to 30 grains of nitrate to the ounce being the more common. It need scarcely be pointed out that with solutions of this strength the preparations partake more of the nature of quick dyes than slow restorers. If the order was reversed and a weak solution, as well as a slower restorer, used, as in the case of the lead solutions, a much safer, and in the end an equally efficacious, preparation would be the result. Pyrogallie acid also reduces salts of mercury, gold, and platinum. With mercury salts it does not yield so effective a preparation as the preparations of mercury already referred to as restorers, while the gold and platinum are so expensive as practically to put them out of court. If a chromatic display is desired, the proto and per salts of iron in various proportions, or a mixture of both, may be used with the pyrogallie solution, and various tints of colour will be produced, ranging from a beautiful indigo to a deep green. Pyrogallie acid is not of metallic origin, but from its important chemical relations, as well as from its own individual value as a hair dye, we may well be excused for referring to it for a moment before we conclude. When exposed, for example, in solution to the atmosphere, it rapidly absorbs oxygen, becomes brown, and ultimately deposits a black insoluble colouring matter. The insolubility of this compound is the more important, as when formed in the hair it remains unacted upon either by sweat or moisture. Probably the rapid oxidation of the pyrogallie acid in solution has prevented its more extensive use as a hair restorer, as otherwise it forms one of the best and safest and most permanent

dyeing agents to be found, and we cannot account for its general neglect at the present time. In connection with it we would throw out two hints which may not be generally known, and which may be taken and developed by anyone of ordinary enterprise, viz., first, that the addition of a small quantity of *sulphite* of soda to an aqueous solution of pyrogalllic acid will preserve it for a very long time unchanged; and, second, that the addition of this preserving agent does not prevent the solution being acted upon and developed into an energetic dye of any degree of shade on the addition of a solution of carbonate of ammonia.

## CORRECTION OF CLINICAL THERMOMETERS.

By J. MARTENSON, ST. PETERSBURG.\*

THE spread of these useful instruments has brought with it the need for verifying them. The predicate "correct" or "accurate" can be bestowed on very few, even of those supplied by renowned houses. This is explained by the behaviour of ordinary thermometers. In a newly-made thermometer, with marks at zero and the boiling point, if left for a time, sometimes only a few weeks, both marks will be found too low, and the mercury will have risen in the tube. After about a year a constant point will be reached, where the thread of mercury lengthens no more.

If such a thermometer is heated, a new slow displacement will take place, lowering the fixed points. Such changes at the zero point take place at comparatively small alterations of temperature. Variations in the warmth of the room will influence delicate instruments. Two influences are at work to produce the former change:—(1) Stresses in the substance of the glass caused by heating, until it reaches what we may call molecular rest, and (2) atmospheric pressure on the vacuum thermometer tube. The depression of the fixed points by variations of temperature is caused partly by renewed stresses, partly by dilatation of the thermometer caused by the mercury. The glass is not such a rigid, unchangeable body as is commonly supposed.

After a long time the fixed points in a thermometer become practically constant, or nearly so. If the tube between 0 and 100 be uniformly wide throughout, the single degrees will also be uniform, and we have a perfect thermometer. Very rarely can such a tube be found.

Clinical thermometers are shortened, and have neither zero nor boiling-point, so that they can only be corrected by comparison with another. Almost all of them have their scale marked on them while quite new, and it is a pure accident when they are accurate. Even when corrected they become inaccurate by use, and need fresh correction.

In the Children's Hospital of the Prince of Oldenburg thermometers are bought in large quantities and are stored. Every one is corrected before taken into use, and again when it seems necessary.

For the correction of clinical thermometers I use one very carefully made by Geissler, of Bonn, verified at the St. Petersburg Observatory. Any other form is inconvenient for rapid and frequent use, but the standard clinical thermometer must be compared at intervals with a standard instrument possessing zero and boiling point.

The apparatus for verifying thermometers is very simple. A thick walled glass vessel, not too shallow, is fitted with a tinplate cover with a number of holes large enough to admit a thermometer and placed near together. A wire sieve is fastened to the cover, and reaches to the middle of the glass. A flat tin ring with a strong wire handle passed through the cover serves as a stirrer, and is so arranged that it does not interfere with the sieve. The thermometers are placed in the holes, the standard in the middle. Water at about 44° C. is poured into the glass. A large magnifying glass must be at hand, with a sheet of paper ruled in columns to record the observations of the different thermometers. While slowly stirring the water at most two thermometers may be compared with the standard, and the process continued as the water cools through seven or eight degrees. The figures

in one case were as follows:—S.=standard thermometer; 1 and 2=two to be tested.

S.	1	2
43.5	43.3	44.1
42.1	41.9	42.6
40.0	39.2	40.4
38.3	38.1	38.8
36.9	36.7	37.4
Correction		Correction
+0.2		-0.5

These show that on an average .2° added to the reading of No. 1, and .5° taken from that of No. 2 will give the true temperature. No. 2 is not so uniform as No. 1. Variations of  $\pm \frac{1}{10}^{\circ}$  from the average may be ignored in practice, but when greater a correction must be made for each degree. The greatest variations met with in 100 thermometers were +1.7° and -1.4°. The correction may be marked with a hard pencil on the thermometer case, which should bear the same number as the thermometer.

There is still another consideration. The standard thermometer is verified in such conditions that the mercury in the tube is of the same temperature as that in the bulb. In the plan here recommended the bulb will be hotter by several degrees than the tube. The late Herr Dohrand supplied a formula for calculating the correction required, which rarely amounts to .1° C.

Maximum thermometers with a movable index are corrected by first driving the index above the mercury, taking the indications of the mercury itself, and adding the length of the index. These are apt to get out of order, and are not to be recommended for general hospital use. Another form of maximum thermometer, in which the whole column of mercury remains above the bulb, is better, but it can only be verified by commencing at the bottom of the scale, and gradually increasing the temperature of the water.

It is a popular error that a large bulb makes a thermometer more delicate than a small one. The extra amount of mercury takes longer to heat, and for taking the temperature at the axilla a small-bulbed instrument is best.

The question of substituting metal for the brittle glass thermometers has long engaged Mr. Martenson's attention.

## THE MANUFACTURE OF ARTIFICIAL BUTTERS.\*

THE artificial butter industry is in a flourishing condition. The public resolves to make at least one trial of the new article, and then finds that it is well to continue its use. The greatest cleanliness must be most painfully observed in every part of the process of manufacture, which is divided into four operations. First is the washing, division, and melting of the raw tallow. Next come the crystallisation of the melted fat, expression of the oleomargarine, and, finally, churning.

The suet must be as fresh from the slaughterhouses as possible. It is washed in large basins till the wash-water runs off clear. It then comes in pieces the size of the fist to the mill. This consists of toothed-rollers revolving in opposite directions at different speeds. It breaks down the suet completely, crushing all the cells. The suet is then mixed with a certain amount of water in wooden tubs provided with pipes, through which steam is driven till the temperature rises to 40° or 50° C. At this temperature the melting suet gives the so-called margarin tallow or *premier jus*. After standing for a time to allow pieces of flesh and skin to deposit, the fat is drawn off to the crystallising-tins. These hold about 15 litres. The temperature of the room is kept at 35° to 40° C., which allows the fat to cool slowly and to deposit the stearin in pure white cakes, while the yield of margarin is as large as can be obtained. The pressing-room is kept at the same temperature as the crystallising-room. The thick pastry mass of fat is poured into cloth bags, placed on a large marble-covered table. Four or six bags are placed one over the other with planks between, and are put under gently and gradually-increasing pressure to force the margarin slowly out without bursting the filter-bags.

The actual manufacture of artificial butter requires the

\* Abstract of a paper read before the Allg. Verein St. Petersburg, Aerzte on November 16, 1882, and published in the *St. Petersburg Medicinische Wochenschrift*, February 10 (January 29), 1883. Communicated by the author.

\* From the *Seifenfabrikant*.



use of oleomargarin, finest sesame oil or ground-nut oil, and milk. The process is as follows:—In a melting-kettle the margarin and oil are brought to a certain temperature; about 20 to 30 per cent. of milk, separately warmed, is added. The whole is placed in a double-jacketed vessel, kept warm with hot water, and thoroughly beaten up with stirring apparatus, and when sufficiently churned it is run into a cooling-basin. When cold it is passed through a mill to press out superfluous water and milk, which hastens rancidity.

## Medical Cleanings.

**VIVISECTION.**—A Parliamentary return has been issued showing the number of experiments performed on living animals in 1882. Fifty-two persons held licences to experiment, but sixteen did not use their licences. Four hundred and six experiments were performed, of which 118 were carried out under the restrictions of the licence alone, and 288 under certificates with special restrictions. The animals made use of were chiefly frogs.

**EUCALYPTUS FOR WHOOPING-COUGH.**—Whooping-cough is treated by Dr. Witthauer with the following (*American Practitioner*):—Tinctura eucalypti, 30; glycerine and syrup, of each, 15.0; aq. fort., 100.0. A dessert-spoonful every three hours. For babes one and a half to four years of age the dose is 5 to 8 drops, in sweetened water, every three hours. He also recommends the inhalation of the tincture. He has treated only four cases, but with a decided effect.

**CRYSTALLINE ELATERIN.**—At a meeting of the New York Academy of Medicine, on April 19, Dr. Caspar Griswold read a note upon crystalline elaterin, which, he said, had been found, after considerable experience, to be a thoroughly reliable article, and of uniform excellence, while most of the other preparations of elaterium (which was well known to be really one of the most efficient of hydragogue cathartics) were so unsatisfactory and variable in their action that the profession had to a great extent given up the use of the drug.—*Brit. Med. Journ.*

**THE PROPORTION OF DOCTORS TO POPULATION** is given as follows by the *Siglo-medico*:—

France .. .. .	2.91 per 10,000
Germany .. .. .	3.21 ..
Austria .. .. .	3.41 ..
England .. .. .	6 ..
Hungary .. .. .	6.19 ..
Italy .. .. .	6.10 ..
Switzerland .. .. .	7.06 ..
United States .. .. .	16.24 ..

**APERIENT-DRINKING.**—One cannot fail to be struck with the large number of aperient waters that have been introduced to the notice of the public during the last few years. That these waters have an extensive sale there is no doubt, and many have obtained a well-deserved popularity. Not a year passes but a number of new aperient waters put in their claim for public patronage, and “the cry is still, They come.” There can be no doubt that from the way in which some of these medicines are “pushed” and advertised more people indulge in their use than have actual occasion for them. Dram-drinking is bad, and excessive tea-drinking is bad, but we think that medical men may say a word now and then against indiscriminate aperient-drinking. An aperient is not, as many think, a cure for every little malady that flesh is heir to, and to introduce an aperient as a feature of one's daily diet is not a step that should be lightly undertaken. Many of these waters are excellent and are of great service, but it would be well if their use was a little more under the control of those who are best acquainted with their action.—*Lancet*.

**HOMŒOPATHY AND THE LONDON HOSPITALS.**—The impetuosity of some of the most important London hospitals has been the subject of much discussion during the last two months. To get deeply into debt would seem to be a guiding principle in the management of some of these institutions. The London Hospital, with an income of 14,000*l.*, spends 47,000*l.*! St. George's is gradually eating up its

capital. The City magnates hold a meeting at the Mansion House and find 40,000*l.* to aid the former. The wealth and fashion of the West-end assemble at Grosvenor House, under the presidency of H.R.H. the Duke of Cambridge, and scrape together 300*l.* in support of St. George's. On the day of this latter meeting, the *Times* endeavoured to draw attention to its claims in a leading article. The whole of the bed accommodation is, we believe, not occupied at St. George's, and if the liberality of those on whom it must needs rely is not greater than it has been, some of those now occupied cannot be refilled. Seeing this article in the *Times*, Major Vaughan-Morgan, honorary treasurer of the Homœopathic Hospital, telegraphed to the chairman of the meeting that he was willing to subscribe 1,000*l.* a year, for five years, to be devoted to the maintenance of beds, the occupants of which should be treated on the homœopathic system. The hospital is in want of funds; it has beds empty from this cause, and is likely to have more; but no notice was taken of this most generous offer! Twenty years ago a similar offer of 6,000*l.* was made by a member of the Gurney family, through Mr. David Wilson, to St. Mary's Hospital. Dr. Wilson was then authorised to make the same offer to every London Hospital, but the result was the same in each instance. Empty beds if you like, but no homœopathy! Mrs. H. E. Gurney then offered to undertake the sole charge of maintaining fifty beds for three years if Dr. Wilson were allowed to have the charge of them; and if the experiment proved a success, she offered to permanently endow thirty-one beds in the hospital accepting the offer. Notwithstanding that several of the hospitals were languishing for want of income, and some had been obliged to close entire wards in consequence, the offer of Mrs. Gurney was rejected.—*Monthly Homœopathic Review*.

## MISCELLANEOUS FORMULÆ.

**ODONTINE**—French chalk, 30; soap, 15; sugar, 15; gum, 2; Berlin red, 2; oil of peppermint, 2; glycerine, 8; water, 8. Work into a paste.—*Seifenfabrikant*.

**LAIT D'IRIS**, by Piver, of Paris, according to Johanson (*Pharm. Zeit. f. Russ.*), is a mixture of 10 parts of chalk and 12*l.* of water, perfumed with oil of orris.

**LAVILLE'S GOUT MIXTURE.**—The following formula is quoted by the *Pharm. Rundschau* from the *Indust. Blatt*:—Quinine, 0.5; cinchonin, 0.5; colocynthin, 0.25; lime salts, 0.45; colouring, 0.3; alcohol, 10; water, 8.5; port wine, 80.

**GLYCERITUM CHLORAL CAMPH.**, recommended for rheumatism, is compounded, according to Pavesi (*Annal. di Chim.*), thus:—Camphor, 5; chloral hydrate, 4; glycerine, 20; alcohol, 15; oil of juniper, 2.

**YELLOW WINDSOR SOAP.**—Melt 74 parts of fresh tallow and 32 of palm-nut oil, and strain. Cool to 50° C. and add 5 per cent. of uranium yellow previously dissolved in a little fat, and, gradually, lye of 25° B. equal in quantity to the fat. When all is well combined, add slowly 40 per cent. of silicate of soda and 5 per cent. of potash solution, 5° B. If not perfectly combined the soap may be warmed again, but not raised to a great heat. When ready perfume with a mixture of 10 parts of lavender oil and 5 each of cummin, cassia, and thyme oils.—*Seifenfabrikant*.

**LIQ. BISMUTHI.**—In a letter to the *British Medical Journal*, Mr. F. W. Fletcher, F.C.S., of the North London Chemical Works, refers a correspondent to the now official United States Pharmacopœia formula for liq. bismuthi, as much superior to “the ridiculous process of the British Pharmacopœia.” The process is briefly this. Subnitrate of bismuth is boiled with a solution of citric acid. A basic citrate of bismuth is thus obtained, quite insoluble in water, which, after being drained on a filter and washed entirely free from nitric acid, may be dissolved in solution of ammonia and diluted to any required strength.

ONE of our popular consultants, not distinguished for his modesty, was relating how he had been called in one week to cases in the Isle of Wight and the North of Scotland. “I have heard,” said a jealous *confrère*, “that your patients are generally at the last extremities.”



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ANALYTICAL CHEMISTS. See page 38.

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**HAY'S SOLUBLE ESSENCE OF GINGER.** See page 60.**HAY'S GINGER CHAMPAGNE.** See page 58.**HAY'S SOLUBLE ESSENCE OF LEMON.** See page 58.

## EDITORIAL NOTES.

### THE EXCISE AND THE MANUFACTURE OF FLAVOURING ESSENCES.

SOME doubt having arisen as to the construction of the clause in the “Spirit Act” relating to compounding, and its bearing on the manufacture of flavouring essences other than Cognac, gin, and rum, inquiries were made at Somerset House. About a month ago a deputation consisting of Messrs. Tyrer (May & Baker), Umney (Wright, Layman & Umney), Yates (Davy, Yates & Co.), and A. Preston (Hodgkinson, Preston & King) waited on the Chairman of the Board of Inland Revenue, and at his request a series of questions and suggestions were formulated and duly submitted for the consideration of the Board. We are able to give a copy of the reply which has been received, dated June 1, and which runs as follows:—

“SIR,—The Board of Inland Revenue have had under careful consideration the statement forwarded by yourself and other chemists, on May 4, relative to the manufacture of flavouring essences.

“It appears that a great variety of these essences are now prepared for use in medicine, confectionery, aerated waters, &c., and, as all these essences contain spirit, it might be held that in strictness the makers should take out compounders' licences.

“The Board understand, however, that none of these



essences are sold by the makers as potable liquors, that only duty-paid spirit is suitable for making them, and that, if in any case methylated spirit should be illegally used, its presence could be easily detected.

"Under all the circumstances the Board do not propose to interfere with the manufacture of such essences by chemists from duty-paid spirit. The question as to the manufacture of 'Gingerine' has been the subject of special consideration.

"It is understood to differ from the other essences and flavours in that it retains none of the spirit used in its extraction from ginger, on which account methylated spirit has been allowed in the process.

"There is some doubt whether the process may not so far alter the spirit that it might be afterwards employed in lieu of duty-paid spirit for other purposes; but for the present no objection will be offered to the use of methylated spirit, under the usual conditions as to bond, in the manufacture of 'Gingerine.' I am, sir,

"Your obedient servant,

(Signed.)

"CHARLES B. FORSEY."

### POISONOUS PATENT MEDICINES.

THE forty-eight pharmaceutical chemists who agreed with Mr. Sandford, at the annual meeting of the Society, that the person whose name may appear on the label of a patent medicine containing poison, and not properly labelled, is the proper person to prosecute if the objects of the new Pharmacy Bill are to be carried out, are to be congratulated on the victory they won, though it would be pleasant if one of them would explain clearly what practical use they hope to make of it. It can hardly be imagined that they expect Parliament to pass a law granting to them the monopoly in the sale of such medicines, but freeing them from all responsibility with regard to such sales. Their vote in some sense directs the new Council to make such a request to Parliament, and the position in which they have thereby placed the Council entitles that body to our sincere sympathy. The Council are almost unanimous in believing that the clause proposed could not be reasonably submitted to the Privy Council. They ask, what are they to do if their Parliamentary counsel advises them that the suggested process of carrying out the Act is an impossible one, and Mr. Sandford tells them to laugh at any such advice. But suppose the clause did get proposed, and suppose the Privy Council adopted it, and Parliament agreed to it. What would Mr. Sandford do if a policeman should call on him with a summons charging him with having issued a patent medicine containing poison not properly labelled? Laugh, perhaps. Yes, but laughing would not settle the matter then. The policeman would say, "Here is the bottle of medicine; it was sold in Yorkshire; it has been analysed and is found to contain morphia, and there is the label bearing the name of George Webb Sandford, 47 Piccadilly, as the manufacturer, and according to the Sandford Clause of the new Pharmacy Act you are the responsible party."

The impossibility of regarding the presence or absence of certain words in a label on a bottle as legal evidence against the person whose name and address are printed on that label is too obvious for comment; and yet, as we understand, that is the only approach to evidence which Mr. Sandford proposes in order to enforce the new law. Let such a law be passed, and every respectable man would be at the mercy of every rogue. A man who intended to break the law in this respect would hardly be so simple as to put his own name and address on a bottle merely as a guide for the police; while a maker who desired to carry out the law in its integrity could be quite easily injured by a malicious dealer a hundred miles

away. Most chemists' assistants are equal to the sleight of hand necessary to open a patent medicine package and do it up again without leaving any trace of having tampered with it.

No doubt it seems hard that a person selling a medicine the composition of which is unknown to him should be liable to a prosecution because it is not labelled in strict accordance with the law. But then the object of the proposal is to prevent these dangerous articles being sold so lightly, and the effect of the law would be to ensure a great deal more care in regard to them. This, as Mr. Carteighe said, is what it was thought the trade and the public wanted. If they do not want any change it is a different matter; but how to deal with the question otherwise than the Council have dealt with it, if it be touched at all, we do not even yet understand.

### ALIZARINE.

AT meetings of the Manchester branch of the Society of Chemical Industry, held on May 1 and 8, Mr. Ivan Levinstein read an important paper on "The Development and Present State of the Alizarine Industry." This paper, with its full details of the various steps in the process of manufacture and application of the dye, comes very opportunely just now, as the patent for the manufacture expires with the present month. For fourteen years the dye has been manufactured in Great Britain by one firm alone, and the price charged has been kept up to fully double the cost by means of a combination between the British and the German makers. In Germany the right to manufacture a patent may be claimed by any one under certain restrictions. This accounts for the fact that there are numerous alizarine factories in that country.

Before 1869 the average annual crops of madder roots reached about 70,000 tons, and occupied some hundreds of thousands of acres in France, Turkey, Holland, and Italy, and the total product at 45*l.* per ton was worth over 3,000,000*l.* sterling, of which this country consumed one-third. To-day no madder whatever is grown. There are some roots still in lands in Asia Minor, and the owners would wish for nothing better than to give these roots away to any one more enterprising than themselves who would dig them up.

So long ago as 1826-8 MM. Robiguet and Colin separated the colouring matters of madder, and called them alizarine and purpurin, and many were the attempts made to manufacture these artificially. But for years chemists proceeded on a wrong assumption. They based their experiments on the theory that alizarine was a compound of naphthaline, and all their efforts failed. Messrs. Graebe and Liebermann, in 1868, got on the right track by tracing the composition to anthracene, a product of one of the heavier distillations of coal-tar. Their first patent was dated December 18, 1868, but the process therein proposed was too complicated and costly to come into practical use, and for a while their discovery remained a scientific curiosity. It possessed extreme interest as the first successful attempt to reproduce a vegetable dye in the laboratory. But they again took up the investigation, and, simultaneously with Mr. Perkin in this country, they found their way to a much simpler and cheaper method of producing the substance. Their English patent was applied for on June 25, 1869, and Mr. Perkin's on June 26, 1869—only one day later, but the latter was the first sealed. The several patentees combined, and Mr. Perkin and the Badische Anilin Company agreed to an exchange of licences. Mr. Perkin transferred his works and his rights to Messrs. Brookes, Simpson & Spiller, and they afterwards

transferred them to Messrs. Burt, Bolton & Haywood, who have held the monopoly in this country until recently. We mentioned in November last that attempts had been made to form a combination between the English and the German makers with a view of forcing the alizarine dyers to agree to certain terms which should be in force until the end of 1884, thus practically securing an extension of the patent for nearly two years more, but the chief dyers resisted the proposal, and formed an association among themselves, with a capital of 200,000*l.*, ready to go into the manufacture of alizarine on the day on which the patent should expire. Negotiations followed, and this company, called the "British Alizarine Company," purchased the works of Messrs. Burt & Co. early this year, and for the moment are the only British makers. On May 8 a letter was read at the meeting of the Manchester section of the Society of Chemical Industry, from the chairman of that company, addressed to the chairman of the meeting, stating that at a meeting of the Alizarin Convention held at Brussels on May 1 it had been resolved, on his proposal, to forthwith reduce the price of alizarine from 2*s.* 6*d.* per lb. for 20 per cent. strength, to 1*s.* 10*d.*, with 5 per cent. discount this year and 10 per cent. next year.

### THE MEDICAL BILL.

ON June 1 a deputation from the Metropolitan Counties' Branch of the British Medical Association waited upon Mr. Mundella at the Education Department, to suggest certain modifications in the above Bill. The deputation was introduced by Dr. Farquharson, M.P., and consisted of Dr. Bridgewater, of Harrow (President), Dr. Hare (President-elect), and the two Honorary Secretaries, Dr. Henry and Dr. Grigg.

The deputation first opened the question concerning women. They wanted an amendment introduced so as to ensure that the Medical Boards and the Medical Council should be kept sacred to males. Mr. Mundella told them they were fighting a shadow. If the feeling against women getting into these bodies was so strong in the profession, as a matter of course they would never get elected.

Then this deputation raised the question of quackery. They thought the Bill was not sufficiently strong in putting down quackery, and they amiably suggested that in clause 27 a sub-section should read, "On and after the said appointed day if any person who is not a registered medical practitioner practises, or professes to practise, or publishes his name as practising medicine or surgery for gain, or receives any payment for practising medicine or surgery, or uses the title of physician, surgeon, doctor, or apothecary, or uses any name to practise medicine, surgery, or midwifery, he shall be liable to a penalty."

Mr. Mundella saw the object aimed at. He said, "That has quite a different bearing from the whole object and scope of the Bill, which has nothing to do with what either apothecaries or chemists may do over the counter. This prohibits men from assuming titles which they do not possess. On that it is extremely strict. It simply leaves the law where it is."

The effort on the part of these medical men to get a trade advantage out of the Bill has therefore failed.

Other deputations have seen Mr. Mundella; one representing the Apothecaries' Company of London was received with sympathy and sent away with hope; the apothecaries of Ireland were not so much encouraged; and some herbalists were assured that there was nothing in the Bill to interfere with them if they avoided the use of misleading titles.

The chances of getting the Bill through Parliament this

session seem to be somewhat diminishing, but it is still very likely to become law.

### OLD PRESCRIPTIONS.

THE *British Medical Journal* of last week has a short article in which it is pointed out (as it has often been stated before) that one of the reasons why medical men cannot hand over the dispensing of their medicines to chemists is the prevailing custom in this country of patients keeping their prescriptions, and having them renewed as often as may seem to them desirable, without re-consulting the doctor. The difficulty does exist, no doubt; and, in regard to prescriptions, strictly so termed—that is to say, the real guinea or two-guinea articles—is not at all likely to be removed. When a sufferer from some troublesome complaint resolves, after much consideration, to make a journey to London for the purpose of consulting some eminent authority on the subject, the prescription he gets and pays for is his for life. A proposal to prevent him using it a second time or lending it to a friend, if suggested to a British Parliament, would only excite ridicule. So much is certain. But it is hardly this kind of prescription which is referred to when the question of dispensing for medical men in country towns is referred to. Given a few honest pharmacists and a few reasonable medical men, and no difficulty of the sort need ever arise. It is as well to recognise the possibility of its occurrence, but plenty of ways will readily suggest themselves of providing against it. If doctors, on the one hand, would abandon the idea that they have a perpetual and vested right in all the diseases of their fellow-creatures, and if chemists, on the other hand, would let go a little of what they think is their reasonable rate of profit on anything that looks like a prescription, this question of dispensing for medical men would make more progress than it does. Much might be done, however, individually or in association, if more persistent efforts were made to bring about conferences between both classes on the subject.

### PHARMACISTS AND THE PHARMACOPŒIA.

IN one of his humorous ballads Mr. W. S. Gilbert apostrophises the great globe, and urges it "roll on" and not trouble itself about his personal concerns. In some pharmaceutical quarters there is a tendency to offer advice the converse of Mr. Gilbert's. As far as the great globe is represented by Her Majesty's Government, and as far as the Government are concerned with the Medical Bill, they are being rather earnestly requested to "hold hard" until the Medical Council submits to the Pharmaceutical Council in this matter of the Pharmacopœia. The Government, through Mr. Mundella, have intimated politely that they are not disposed to alter their Bill to meet the demands of the pharmacists: a reply which the Pharmaceutical Council must have been prepared for. Nothing remains but a fierce Parliamentary struggle on the point. Mr. McCullagh Torrens is no doubt prepared to lead the opposition, and in the event of the defeat of the Government will be ready, we presume, to form a Ministry pledged to carry the Pharmacy Bill as well as to reform the Medical Bill. He himself urges pharmacists to petition the House on the subject. He is an authority as to the value of petitions, and he compares them to snow-flakes.

What object the Council expect to gain by their present course is not very clear. They can hardly hope to win their case. If they should do so, the victory would be a purely sentimental one, and would be secured at the cost of an



amount of irritation in the medical profession which would certainly make itself felt in the future. Their arguments, as far as they claim a *right*, are not conclusive, and by pressing the *right* the end sought is likely to be distanced rather than attained. The combative spirits in the trade, however, seem very eager for the battle, and apparently anticipate some tangible advantage which is not generally visible.

Those pharmacists who decline to offer any suggestions for the improvement of the Pharmacopœia until the demands of their Society are acceded to are, of course, quite within their rights. The dignity of their action is for themselves to judge of: their chances of ensuring a successful "strike" anyone can calculate.

A GIRL named Margaret Frame has been sued at Glasgow for 200*l.* damages for occasioning the death of a little boy four years of age. She had mixed jalap in a plum pudding for a joke, and had given some to certain boys. The boys gave pieces to others, and one piece was given to the child of Andrew Robertson, a carter. The child was ill for a week and died. The sheriff dismissed the action, but without granting any expenses to the defender. He thought there was not sufficient evidence to prove that the child died as the direct consequence of the act, and further held that the girl being only seventeen years of age, and living with her father, he ought to have been called as her curator.

THE decimal system has taken one further little step in advance towards its establishment in this country by its substitution in the Mint calculations in place of the curious old-fashioned form of describing bullion. Standard gold in this country contains 91.66 per cent. of pure gold and 8.34 per cent. of copper. Variations from the standard are described as "worse *x* carats *x* grains," or "better *x* carats *x* grains." Professor Chandler Roberts, the chemist to the Mint, has represented to the Master the advantages of using instead a simple decimal form of expression, and this has now been adopted. That relic of the past has been torn from us, and Great Britain still exists.

MR. CARTEIGHE, in his speech on the report at the Pharmaceutical Society's annual meeting, in alluding to the Benevolent Fund, is reported to have said that "the great majority of applications for relief were from registered chemists and druggists who had never been connected with the Society at all," and on that ground he urged all the members of the trade to contribute. We would regret to write one word which would check a contribution to the fund, or which would seem to depreciate the generosity with which that fund, originally founded for the members of the Society, has been since thrown open to the whole trade, and has been ever since administered. But the statement quoted is likely to lead to a misapprehension which it can be nobody's interest to promulgate. Whatever may be the proportion of the "applications," the statement which Mr. Carteighe held in his hand showed that the *grants* made during 1882 to persons who had been connected with the Society, or to their relations, amounted to 285*l.*, while those made to registered chemists and druggists or their relatives during the same period amounted to 151*l.* Bearing in mind that the latter section are twice as numerous as the former, and might be expected to include a far larger proportion of poor men, the figures quoted are at least striking—sufficiently so, we should think, to call forth a word of retraction even from the President of the Pharmaceutical Society for his "heedless rhetoric."

THE second annual meeting of the Society of Chemical Industry is to be held in London at the Institution of Civil Engineers on Wednesday, July 11. The meeting will take place at 11 A.M., under the presidency of Sir Frederick Abel, F.R.S. That evening there is to be a dinner at the Freemasons' Tavern, and the next evening the presidents of the Chemical Society, the Institute of Chemistry, and the Society of Chemical Industry are to hold a reception somewhere, though it is not yet announced where. During the two days there are to be visits of parties of the members to

the following works:—Messrs. Doulton (art pottery), South Metropolitan Gas, Electrolytic Company, Vacuum Ice Company, Messrs. Duncan's (sugar refinery), Messrs. Ohlendorf's (guano and chemical manure), Messrs. Knight & Son (soap), Lager Beer and Ice Company, and Woolwich Arsenal. Messrs. Doulton, Duncan, and Ohlendorf, it is announced, will not admit members engaged in similar industries to the inspection of their works. Doubtless these gentlemen have a perfect right to make such a stipulation, but was it worth while for the Society to accept their courtesy under conditions which will make it something like a breach of faith for anyone ever to utilise any idea which may be suggested by his visit?

WE have received several reports of cattle poisoning during the past month. At Caeadle, Staffordshire, a cow belonging to a county magistrate, a valuable prize bull belonging to Mr. Glover, and several valuable dogs have been poisoned, but the perpetrators of the outrages have not been discovered.

At Whitchurch, a man named Cartright has been committed for trial on a charge of poisoning two heifers belonging to a Mr. Langford. The latter had offended Cartright by refusing to be bond for him and also by refusing to sell him cattle on credit. Prisoner was also charged with poisoning a horse belonging to another gentleman, and four pigs belonging to someone else. All had died of arsenic, and it was found that prisoner was acquainted with the foreman of Messrs. Matthews' paint-works in Liverpool, and that the latter had given him 1, 2, or 3 lbs. of arsenic (he did not remember how much exactly) for the purpose of killing vermin.

Two cows belonging to the Earl of Haddington, at Tarporley, Cheshire, have been killed by eating grass which seemed to have got poisoned by some stuff which had been used in the carriage-drive for killing weeds.

At North Leys, Aberdeenshire, five cows have been poisoned by eating red lead, which it was supposed had got accidentally mixed with the town's manure which Mr. Davidson, the owner, had purchased.

WE would specially call attention to the notable change which the introduction of the parcels post will make in the arrangements of many country chemists who have hitherto employed rural post-runners in their non-official capacity to deliver small parcels. All such packages, on and after August 1, must be posted at the post office, and the carriage prepaid by affixing stamps as for a letter.

THE invincible power of perseverance has often been the theme of eloquent essays, but it comes out a little discredited by the history of our recently-departed contemporary the *Chemists' Journal*, which closed its career at the end of May after a struggle for existence extending over three years. A touching incident is connected with the last moments of this periodical. In the last-issued number appeared the first half of a paper appropriated from our pages, which was to be continued. The editor may have intended to acknowledge the source of the article when he printed the concluding portion; but the knell sounded, and he had lost for ever the opportunity of doing us that justice. The good intention, if it existed, will not go far as a pavement, and cannot soothe the remorse the gentleman must suffer. We mention the matter only as a warning to other editors who habitually follow the practice referred to.

THE quadrennial discovery prize offered by the Worshipful Company of Grocers is now announced. They propose the following problem:—

"To discover a method by which the vaccine contagion may be cultivated apart from the animal body, in some medium or media not otherwise zymotic—the method to be such that the contagion may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard vaccine lymph."

The prize is open to universal competition, and essays



need not be sent in before December 31, 1886. The arguments of Mr. Peter Taylor and his friends are to some extent justified, and the existing vaccination laws to an equal extent discredited, by the proposal of this question for scientific solution.

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THE NATIONAL TRADERS' LEAGUE held their first conference at the Cannon Street Hotel last month, when the promoters and some of their friends made vigorous speeches. The League is composed chiefly of grocers, but we are told that thirty other trades are represented. The most hopeful feature of the movement is that it puts forward definite objects. The leaders want to go to Parliament and demand simply and firmly that gentlemen employed in the various departments of the Civil Service shall be engaged on just such conditions as they would have to accept if they were occupied in other service. That they shall have proper pay, but that for that they shall be positively required to be in attendance at their offices except when they are actually ill; that pensions and compensations shall be abolished; that the hours of employment shall be reasonable in both senses; and that only so many servants shall be employed as are needed to do the work. If the National Traders' League can create a small party in Parliament who will present those claims in season and out of season with the calm, patient persistence which, as another section has shown, can secure so much, they will win adherents rapidly. But traders will not be in a great hurry to spend their half-guineas merely for the satisfaction of creating one more association, with its grand council, executive, and sub-committees, and all the paraphernalia of a modern organisation.

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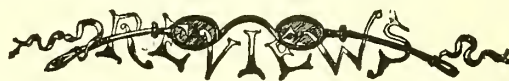
A London firm, not at present very widely known in the country, has started on new lines. It publishes price-lists of chemicals and other requisites used by cabinet-makers, artificial-flower makers, jewellers, electroplaters, perfumers, polishers, and many others. Its advertisements are inserted in the technical journals devoted to the several trades. This seems a very legitimate employment for enterprise. It needs study and special acquirements on the part of the caterer, but intelligence and application ought easily to build up a profitable business.

\* \*

A YEAR or so ago it was suggested that pharmacists should turn their attention to the manufacture of artists' pigments. This stirred some up to think about the matter, and we were asked to indicate books which dealt with the subject. So far as we know, there are no such books. Professor Church delivered some lectures on pigments before the Royal Academy students, and these were reported in the *Artist*. The information given in them was confined to first principles, and hardly touched on manufacturing details. This leaves the pigment-maker more to do and more right to charge good prices for his wares. If books existed giving full particulars of the manufacture of the choicest pigments, anyone with manipulative skill might make them, and the public would pay only for this skill and the materials. Far more profitable is it to experiment and labour till facts are discovered known only to the discoverer. He is then fully justified in charging for his work all that the public can be persuaded to pay. He need have little fear of competition, and, if he is wise, he will neither patent his ideas nor reveal them to any soul but himself. The story of Bessemer gold paint has been often told, but it is apt, and we may be forgiven if we repeat it from memory. One day Bessemer needed some gold paint or bronze powder, and sent to a shop for it. The price was so enormous compared with the intrinsic value of the crude bronze that it set him thinking and experimenting. He designed a machine, sent the working drawing of each part to a separate foundry so that none could guess its aim; hired a room, set up the machine with his own hands, and commenced the manufacture in secret. He at once secured a large business. He admitted one or two workmen to the secret, giving them such a stake in the concern that secured their fidelity, and up to the present day the manufacture has been carried on with enormous profit to the inventor. So long as the secret is preserved the process will retain its value. We believe that Sir Henry

Bessemer has now handed over the business to the two men who have acted as his assistants for many years past.

Secrets so valuable as this are not easily acquired or retained. There is no short cut to wealth, and those who wish for more than the honest livelihood of plodding industry must be content to labour and think harder than their fellows.



AND

## Literary Notes.

*Materia Medica.* A Manual for the Use of Students. By Isambard Owen, M.D., Lecturer on Materia Medica and Therapeutics to St. George's Hospital, &c. London: J. & A. Churchill. 1883.

WE have every sympathy with students who demand, and with authors who endeavour to provide, a royal road to knowledge. We do not know that this manual will be more successful in supplying the want as regards *Materia Medica* than many others that have appeared with similar aims; but this can, at least, be said for it, that it does not, like many manuals, harass the attention or burden the mind of the student with too many details. It probably contains *all* the information necessary to enable a student to pass his examination; it certainly does not contain much more, but the majority of students will probably not object to this, nor can any charge be founded on it against the manual itself, seeing it is expressly brought forward "rather as a supplement to than as a substitute for the systematic works." We do not wish to be over-critical with this little treatise, but we cannot help thinking that a better arrangement of the matter might have been adopted. In tracing out the preparations of any individual drug we find ourselves curiously shuttlecocked among the pages of the book. One of the first things, for example, that met our eye on opening the book was the following, page 33:—

*Linimentum aconiti.*—A strong tincture, about ten times the strength of tr. aconiti, with camphor.

*Linimentum belladonnae.*—A VERY strong tincture, about four times the strength of the extract, with camphor.

Passing over the ambiguity of the information contained in the two paragraphs, and also the construction to be put on the terms "a strong" and "a very strong tincture," we were a little curious to ascertain the data on which the comparison of the relative strengths of the liniment and extract of belladonna were founded, more particularly as some importance seemed to be attached to the fact, seeing the information was put in italics. This led us into an examination of belladonna and its preparations—a matter more serious than we had at first imagined. Before we obtained all the information, or, at least, all that we could find (for we are not certain that we have exhausted the subject, the index giving us little or no help), we had to consult pages 3, 5, 25, 26, 27, 28, 33, 62, 63, 64, 65, 79, 159, continually being met with something like the following: "See pages 8 and 27," or "See tenth Group" or "Twenty-first Group," &c. Nor did the information under certain sections help us very much. For example, under "Ninth Group" (page 25) we have the following:—

*Belladonna folia*—Belladonna Leaves—from *Atropa belladonna*, Deadly Nightshade (Solanaceæ). Contain the alkaloid atropia. (See twenty-first Group.)

*Belladonna radix* is also official. (See tenth Group.)

If this conveys any meaning at all to students, it certainly is that the alkaloid is officially obtained from the leaves; but if we turn to the tenth Group (page 28), we get the order reversed, thus—

*Belladonna radix*, from *Atropa belladonna*, Deadly Nightshade (Solanaceæ). Root. Contains atropia. (See twenty-first Group.)

*Belladonna folia* are official. (See page 25.)

Turning up the twenty-first Group (page 62) we get the following information:—

*Atropia*, *atropin* ( $C_{17}H_{23}NO_3$ ), from *Belladonna radix* (page 28), by a method detailed below. Acicular crystals. Soluble in 8 parts of rectified spirit. 500 of water.



This is on page 62, and the method "detailed below" is detailed on pages 65 and 66. Nor are matters made much clearer by coming across occasionally something like the following (page 27):—

*Tinctura belladonnae.* The three kinds of senna leaves are used indifferently.

Of course an expert at once understands that the senna leaves here spoken of do not refer to the tincture of belladonna, but to some preparation of senna on the previous page, or to some preparation of senna on the same page further down; but, as it is opposite the tincture of belladonna and isolated from any preparation of senna, the information is very confusing to a learner. With these defects, the manual contains much that will prove useful to students tersely put, while the series of tables at the end will do much to compensate for the defects mentioned.

*An Introduction to the Study of Organic Chemistry.* By Adolph Pirner, Ph.D. Translated and revised from the fifth German edition by Peter T. Austen, Ph.D., F.C.S. (New York: J. Wiley & Sons. London: Trübner & Co.)

AMONGST the large number of text-books of elementary chemistry available for the use of the English student, comparatively few attempt to deal with organic chemistry. It has been too generally assumed that this branch of the science is peculiarly the domain of the specialist, and that the average student may pass it by with very little notice. In reality, many of the more important fundamental truths of chemical science are only to be fully realised by the study of the carbon compounds. It is to this branch of chemistry that we are mainly indebted for the broad generalisations that have within the past few years gathered the scattered facts relating to the distinctive properties of the elements into something like a coherent whole. The various forms of simple matter with which the chemist has to deal are no longer the isolated and unconnected elements of the early chemists: they are the intimately related members of a series exhibiting a gradational change of properties capable of being numerically expressed. This conception is as yet in its infancy, and it is impossible to say how it may influence the progress of the science. From a totally different point of view organic chemistry has recently acquired an importance that it did not possess a few years ago. Technical chemistry until quite recently dealt almost exclusively with inorganic matter, but now a number of important industries have arisen from discoveries made in the investigation of the carbon compounds, and the industrial applications of this branch of the science seem to be practically unlimited. We turn, therefore, with considerable interest to a fresh effort to facilitate the study of so important a branch of knowledge. This work is a translation into English of the work of Professor Pirner, of Berlin, which has already reached a fifth edition. "It is founded on the system of teaching developed by the distinguished chemist Professor A. W. Hofmann, of Berlin." In the introductory chapter the mode of determining the molecular composition of organic bodies is briefly described, and there is a short sketch of the general laws under which substitution takes place. The subject matter of this introductory chapter is really the groundwork of organic chemistry, and would seem to demand more exhaustive treatment than is possible within the limits of fourteen pages. The various groups of organic compounds are then dealt with systematically, beginning with the Methane or C<sub>1</sub> group, and proceeding to the Hexane or C<sub>6</sub> group, and thence to the more complex bodies—fats, carbohydrates, aromatic compounds, resins, alkaloids, glucosides, protein substances, &c. Throughout the work there are occasional chapters of a very useful character, entitled "Retrospects." In these the substances dealt with in the preceding pages are reviewed from a different standpoint. For example, compounds which have been considered according to their relations to the carbon series are reconsidered in the retrospect in classes arranged according to the nature of the substitution by which they are produced. In this way the halogen derivatives of the hydrocarbons are not only referred to in dealing with each separate member of the carbon series, but they are taken as a class, and as such their mode of formation and general properties are described. There is an appendix of some

thirty pages devoted to organic analysis, determination of vapour-density, analytic and synthetic methods of determining the composition of compounds, condensation, polymerisation, the action of reagents, and atomic migration, and the volume concludes with a copious index.

The translator states in his preface that he "has not hesitated to employ numerous expressions which have come into use in working laboratories, and which recommend themselves for brevity and clearness." Amongst writers in this country there is a very commendable tendency to preserve the purity of form of the Queen's English, but our American friends do not appear to have as great regard for what we may call the "President's English." Throughout this work there are occasional irregularities of language and novel expressions, which many would consider have neither brevity nor clearness to recommend them. The compounds of the alkali metals with the alcohols are spoken of as being very "reactive," certain atoms of hydrogen are said to be "substitutable" by metals; again, "the sodium substitutes an H of the hydroxyl," "Urea 'falls into' ammonia and cyanic acid on heating with a solution of silver nitrate, &c." The progress of science necessitates the introduction of new words, and adds new meanings to old ones, but such changes should not be needlessly made. The word "root" is no improvement on "radicle," if, indeed, it is not an alteration for the worse. These are, however, matters of minor importance; viewed as an aid to the study of organic chemistry, we must regard this hand-book as an important addition to our literature of this branch of science.

*A Manual of Chemical Analysis, as applied to the Examination of Medicinal Chemicals.* Third edition; thoroughly revised and greatly enlarged. By Frederick Hoffmann, A.M., Ph.D., Public Analyst to the State of New York, &c., and Frederick B. Power, Ph.D., Professor of Analytical Chemistry in the Philadelphia College of Pharmacy. Philadelphia: Henry C. Lea's Son & Co. 1883. London: J. & A. Churchill.

THIS work has undergone a very considerable change since the first edition appeared in 1873; in its present form it is a marked improvement on the earlier editions. The book begins with an outline of qualitative analysis, adapted for the examination of any substance that the pharmacist or medical practitioner is likely to have to deal with. This is succeeded by a chapter on volumetric analysis, and then follows a chapter on the general characters and methods for the separation and recognition of some of the principal alkaloids and allied principles—a subject of growing importance, and one which demands the utmost attention from the chemist as well as the pharmacist. This part of the work would be improved by a more complete reference to the several authorities mentioned in the description of the reagents employed and the mode of applying them. The succeeding part of the volume treats of the medicinal chemicals in alphabetical order; their physical and chemical characters are described, and directions given for determining their quality and purity, and for their quantitative estimation. Under each heading the name of the preparation is given in Latin, English, German, French, and Spanish; only the Latin and English names are referred to in the index; it would be an advantage if in certain cases the names in the other languages were also included. It would enlarge the index uselessly to add the foreign equivalents of every preparation described in the volume, but in some instances the foreign names do not at all resemble the Latin or English names, and in such cases it would be an obvious advantage to be able to refer to the preparation with the aid of the index. The introduction of chemical formulæ throughout the work is a very decided improvement, which will be fully appreciated by the more intelligent class of readers. The description of the methods employed for the detection, and, as far as practicable, the quantitative estimation of chemical poisons likely to be met with in forensic research, is an addition that largely increases the value of the work. The illustrations are copious, and well adapted for the purpose for which they are intended; those representing the forms of crystalline bodies will be found useful in the identification of these compounds. The authors are to be congratulated on the manner in which they have remodelled the work; in its present form it is sure to prove a valuable aid in the practice of pharmaceutical chemistry.



*The Vegetable Materia Medica of Western India.* By W. Dymock, Surgeon-Major of the Bombay Army. To be completed in Four Parts, at 2 rupees each. Part I. Bombay and London: Trübner & Co.

THIS substantial pamphlet, of 160 pages, is the first instalment of a work which promises to be very valuable. It aims to supply a more exact description of Indian drugs than is to be found in any work hitherto published. The principal objects kept in view by the author have been (1) to give a short summary, when possible, of the history and uses of each drug; (2) to describe each article with sufficient minuteness to insure the detection of any adulteration; (3) to draw up a condensed account of what has already been published concerning the chemical composition of the different drugs. The commonest native names of the drugs are given at the head of each article, and the Sanscrit, Arabic, and Persian names in the Historical Summary.

The part before us deals with more than 120 drugs, and is full of interesting matter, while it seems to refer to every source whence further information could be obtained.

It has been excellently printed at the Education Society's Press, Byculla, Bombay. We trust the finished work will be provided with a complete index to every vernacular and scientific name that occurs in its pages. The book will be so useful to Indian and European students that it will pay for this additional labour.

WE have received a copy of the second edition of Mr. B. S. Proctor's "Lectures on Practical Pharmacy," just published by Messrs. J. & A. Churchill. We must reserve a notice of this until next month.

"THE EXPORT MERCHANT SHIPPERS' DIRECTORY" for 1883, edited by a Custom-house employé, and published by Dean & Son, contains this year the shippers of twenty-six ports in Great Britain classified according to the goods they ship and the countries to which they export. Aberdeen and Dundee are the additions for the new year. The information is clearly arranged and indexed, and must be useful to manufacturers who wish to discover the best channels for their products.

A LITTLE book called "Five Hundred Practical Trade Receipts for Chemists and Druggists" is being advertised in these pages, and a copy has been sent to us by "the compiler." Some, we are told, are original, and the rest have been selected. None are acknowledged. Many of our own most cherished offspring smile on us from the pages of this little book, and we give a melancholy smile back. Those who use the collection will not care, we suppose, where the formulæ come from, so long as they are good ones: but it is a little hard on the original proprietors.

A SECOND edition of "The Latin Grammar of Pharmacy," by Mr. Joseph Ince, has just been published by Messrs. Baillière, Tindal & Cox. The first edition has only been before the pharmaceutical public for a little more than a year. This early call for a reprint promises well for the permanence of the work as the pharmaceutical student's guide to Latin. We have already said that it most fully meets his requirements, and by the fact that the illustrations are generally chosen from the words likely to be familiar to dispensers, the path of the student is considerably aided, whether he may or may not have imbibed earlier notions of the language from one of the more generally employed school-books. Besides the correction of a few press errors, this edition only appears to differ from the first by some extension of the section on the translation of prescriptions, a number being given in English for translation into Latin.

REVERSED HEREDITY.—Mdlle. Bernard, the daughter of Claude Bernard, has just been fined 1*fr.* by the police tribunal of Boulogne-sur-Seine, on complaint of her neighbours, for converting her entire courtyard, garden, parlour, and even her bed-room into an immense kennel for the care of destitute dogs. She felt that some reparation was due to the canine race for the miseries inflicted on it by her father's vivisections.—*Drug Circular.*

## Scientific Notes:

*On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.*

### CHINOVINE AND CHINOVIC ACID.\*

ALTHOUGH the waste, or by-products, of the manufacture of quinine contain considerable quantities of chinovine and chinovic acid, these substances have been but little investigated.

Operating upon large quantities of such by-product, C. Liebermann and F. Giesel have of late prepared both chinovine and chinovic acid in a pure state.

The authors find that the chinovine obtained from cuprea bark is somewhat different to that yielded by cinchona, and term the latter  $\alpha$ , and the former  $\beta$ , chinovine.

$\alpha$  chinovine is a white light crystalline powder, quite insoluble in cold, and but sparingly soluble in hot, water. It is also very difficultly soluble in benzole, chloroform, and absolute ether. It is, however, soluble in alcohol, both strong and dilute, crystallising from the former on the addition of water, in rosettes of minute needles, and from the latter in shining scales. It is further soluble in aqueous solutions of the alkalies, and in lime and baryta water.  $\alpha$  chinovine dissolves in concentrated sulphuric acid to an orange yellow colour, with formation of carbonic oxide.

$\beta$  chinovine is very similar to  $\alpha$ , but differs from it in being perfectly insoluble in absolute ether, and crystallises out from very strong alcohol without the addition of water.

Chinovine acid is a snow-white powder, consisting of minute needles. It is entirely insoluble in water, and but very slightly soluble even in boiling alcohol or glacial acetic acid. It is, however, soluble in ammonia and in solutions of the alkalies and alkaline earths. The chinovates of ammonium and calcium crystallise from their solutions in alcohol in needles; the former salt loses its ammonia on exposure to the air or upon boiling its alkaline solution. Chinovic acid decomposes the carbonates of the alkalies, forming chinovates of the bases.

The formula for chinovine is probably  $C_{39}H_{62}O_{11}$ , and for chinovic acid  $C_{23}H_{40}O_8$ , but the authors have not come to a definite conclusion and are continuing their researches.

### THE EMPLOYMENT OF HYDROGEN PEROXIDE IN CHEMICAL ANALYSIS.†

NOTWITHSTANDING that hydrogen peroxide has been known for a long time, and is daily used for a number of technical purposes, its employment in chemical analysis has hitherto remained in abeyance. This has probably been due to the loss of time involved in preparing it pure in the laboratory, and the impurity of its solutions hitherto brought into the market.

Carl Roth & Co., of Berlin, now prepare solutions of hydrogen peroxide in a state pure enough for analytical purposes, and the authors of this paper, Alex. Classen and O. Bauer, have employed it with success in several analytical determinations.

Hydrogen peroxide converts ammonium sulphide to sulphate and, what is the same thing, its solutions made alkaline with ammonia, oxidise sulphuretted hydrogen.

A number of metallic sulphides are very readily oxidised by an alkaline ammoniacal solution of hydrogen peroxide without any intermediate precipitation. This is the case with the sulphides of arsenic, copper, zinc, and thallium. In the case of tin sulphide, the oxide of the metal is precipitated, while the whole of the sulphur is oxidised to sulphuric acid. Mercury sulphide, which is hardly attacked by nitric acid, is very readily oxidised by hydrogen peroxide. A solution of cadmium sulphide forms a yellowish-white precipitate soluble in hydrochloric acid.

Several metallic sulphides, the solutions of which are precipitated by ammonia, are decomposed by hydrogen peroxide into sulphuric acid and a hydroxide of the base, which precipitates, for instance, iron sulphide.

The authors believe that hydrogen peroxide will soon be

\* *Berichte der deutschen chemischen Gesellschaft*, April 23, 1883.

† *Berichte der deutschen chemischen Gesellschaft*, May 7, 1883.



generally employed in analytical operations, as a clean, handy, and energetic oxidising agent. Amongst other determinations which yielded good results may be mentioned the determination, in the presence of sulphuretted hydrogen, of hydrochloric, hydriodic, and hydrobromic acids.

#### A NEW BEETROOT ACID.

In a paper printed in the *Berichte der deutschen chemischen Gesellschaft*, May 7, 1883, Edmund O. Lippssiarin, after alluding to the various acids obtained by him, by means of fractional crystallisation, from the incrustations deposited by unripe or decomposed beetroots in the evaporating-pans (sugar-works), states that he has now found a new acid, which he suspects to be oxycitric acid. The other acids found by him in the incrustations above alluded to, are citric, aconic, tricarbylic, and malic acids.

#### KINO.\*

THE discrepancies of a number of authors as to the composition of kino, induced A. Kremel to examine several kinds of the gum, and he has found in none of them any substance producing a red coloration with iron perchloride (Etti). Protocatechuic acid alone, or mixed with gallic acid, was constantly present, and these two were the only substances found, the pyrocatechuic, pyrocatechuic acid, and rimoin of other chemists being conspicuous by their absence.

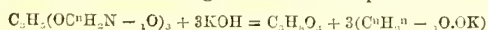
#### VOLUMETRIC ANALYSIS AND FAT-TESTING.†

KARL ZULKOWSKY and Max Gröger have thoroughly tested Haussmann's volumetric method of analysing fats, and have at the same time so improved and simplified the same that in their opinion the examination of a mixture of neutral fats and fat acids is easier than an examination of a mixture of caustic soda and sodium carbonate. Haussmann's method is based upon the fact that an alcoholic solution of a fat acid is immediately saponified on the addition of an alcoholic solution of caustic potash, whereas the saponification of a neutral fat can only be effected by protracted boiling. When, therefore, an alcoholic solution of fat acids and neutral fats, to which some phenolphthaleine has been added, is titrated with caustic potash, the red colour disappears as long as any fat acid is present, and the solution does not attain a permanently red colour until all the fat acids are saponified. When the red colour has set in, an excess of caustic potash is added, and the whole boiled for half an hour to saponify all the neutral fats, and re-titrated, whereby the amount of caustic potash required to effect the saponification of the neutral fats is ascertained, and the quantity of caustic potash required for each titration represents the relative proportion of fat acids and neutral fats in the mixture operated on.

Not only is the method useful in ascertaining the relative proportions of fat acids and neutral fats in a given mixture, but it also serves for testing fats generally, as, for instance:—

1. For determining the equivalent of a fat, *i.e.*, the proportion saponifiable by an equivalent of caustic potash, or 1 litre of a normal solution of potash. The result obtained might, under circumstances, serve as a criterion as to the nature of the fat. The equivalent would, no doubt, in the case of butter-testing, indicate whether the butter was genuine or artificial.

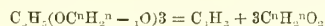
2. For determining the amount of glycerine (theoretical yield) in fats in the most simple manner imaginable.—When a neutral fat, or a mixture of a number of such fats, is saponified, the following reaction takes place:—



According to the above equation, every litre of normal potash solution splits up one-third equivalent of glycerine—*i.e.*, 30.667 g. 1 c.c. of normal potash is therefore equivalent to 0.030667 g. of glycerine.

3. The amount of glycerine a fat would probably yield having been ascertained by the above titration, and provided the fat is pure and free from moisture, the theoretical yield of fat acids would be easily calculated.

Triglycerides may be considered to split up in the following way:—



On comparing this equation with the one above, 1 litre of normal potash represents one-third equivalent of glycerine residue,  $C_3H_5$ —*i.e.*, 12.667 g. Supposing v. c.c. of normal potash to have been employed, the weight of the glycerine residue would be (0.012667 v.), which may be represented by the letter g, and let F represent, in grammes, the original weight of the fat; then F - g will represent the yield of fat acids to be expected from it.

#### PEPTONE.\*

THE results of Eichwald's researches, together with his own, have led A. Poehl to the conclusion that there is but one form of peptone, or, in other words, that only one peptone exists.

Precipitated from its solutions by alcohol, peptone yields a fine flocculent precipitate; dried over a water-bath, it becomes a yellow, friable, very hygroscopic mass, very readily soluble, even in the cold, in a comparatively small quantity of water, forming a transparent, colourless liquid which is not altered by boiling. A mixture of acetic acid and potassium ferrocyanide produces no precipitate in its aqueous solutions.

Even dilute solutions of peptone are precipitated by a solution of basic lead acetate.

Absolute alcohol produces in concentrated neutral solutions of peptone a flocculent precipitate which is readily dissolved on diluting with water. Acid or alkaline peptone solutions are not precipitated by absolute alcohol, the reagent producing in such but a mere cloudiness.

Coincident with Eichwald, the author has found that, under suitable conditions, various substances are capable of converting albumin into peptone and *vice versa*, that desiccating agents, such as alcohol and the neutral salts of the alkalies, revert it to albumin.

In his very interesting paper the author points out the discrepancies in the statements of various authors when writing about peptone, and accounts for them in the Protens-like modifications of albumin and peptone, the one having probably been often mistaken for the other, which was certainly excusable at a time when it had not been proved that these substances were reciprocally convertible one into the other, and more especially as ultimate analysis detects no difference between them.

#### FILTRATION.

In a paper, entitled "Some Facts concerning Filtration," read before the Liverpool Chemists' Association, Dr. Symes gives some results of his experience which are worth quoting:—

"The ribs of funnels (especially of large ones)," he says, "to be of any real value should be much deeper than they usually are, and should not run vertically, but spirally. A piece of muslin placed between the paper and funnel not only strengthens and supports the paper, but assists in filtration by preventing adhesion; a cone formed of coarse hair-cloth is still better. For larger sizes, say of from 4 to 8 pints, it is advantageous to dispense with the funnel altogether, and to use an inverted cone formed of linen or stout calico; the edges being fastened to a wooden hoop, which, resting on a deep earthenware pan, forms an efficient support for the paper, the liquid passing through with equal facility over the entire surface, a suitable cover placed over it excluding the air, and the process goes on under comparatively satisfactory conditions. A self-feeding arrangement can be fitted to this, if it be so desired, in a very simple manner.

"English paper-makers do not appear to have devoted much attention to the production of filters in any variety, and for this reason we derive our supplies chiefly from the Continent. It is a well-known fact that holding almost any of the common filters up to a strong light they are seen to be perforated more or less with minute pinholes, so that when in use it is only after these have become filled up that

\* *Pharmaceutische Zeitung*, May 16, 1883.

† *Berichte der deutschen chemischen Gesellschaft*, May 21, 1883.

\* *Berichte der deutschen chemischen Gesellschaft*, May 21, 1883.

the whole of the solid matter is separated, and the liquid passes through bright. Each time a fresh portion of liquid is added, the disturbance caused thereby is liable to remove some of the particles which are acting as a filling, and if this occurs filtration again becomes imperfect. The presence of animal matter, as in the grey filter, increases the strength, but diminishes its working capabilities, and the existence of mineral matters therein does the latter but not the former. The papers specially prepared by Messrs. Schleicher & Schüll are practically free from all extraneous matters, the pulp having been treated with hydrochloric and hydrofluoric acids, &c. They are an example of what can be accomplished in this respect, but they are too expensive for general pharmaceutical purposes, and, indeed, are only made in comparatively small sizes suitable for analytical work. The French make a paper specially suitable for syrups, thick to support the weight, and yet sufficiently pervious to allow of fairly rapid filtration.

"Some fabrics, such as swansdown, close textured twilled calico, &c., filter as brightly as paper does, and may be used for that purpose as distinct from ordinary straining, provided the solid particles separate from the liquid in which they are suspended with ease, but when this is not the case they are of much less value; indeed, with paper as a medium, slimy deposits present considerable difficulty. Pepsine wine, prepared from the fresh, undried pepsine, might be regarded as typical of this class of liquids; the tendency being to clog up the pores of the filter almost immediately the operation commences. In such cases some kind of coarse straining material placed within the paper cone helps materially to obviate the difficulty. Hair cloth and thin coarse flannel answer well for this purpose; they operate by collecting on their rough projecting surfaces the larger proportion of the undissolved slimy matter.

"For removing suspended particles from strong acids, spun glass, known as 'glass wool,' answers best. With ordinary liquids, when there is but little insoluble matter, absorbent cotton not only strains, but, by fairly tight packing, filters brightly. In cases where it is desired to save the deposit, and possibly to dry or incinerate it, asbestos paper can be recommended; the liquid passes through it slowly, but it is very strong, and it is indestructible by heat. Paper lint, as introduced from America some few years ago, answered well as a filtering medium, being both strong and absorbent; but I am not certain whether its manufacture has been continued.

"Recently there has been advertised a 'Filtre Rapide,' in which the filtering material is placed on a frame or support rising up within the cylinder, and forming a space in the centre into which the filtered liquid flows laterally to a receiver below. It is a compact and ingenious arrangement, but I have not any experience from which to speak of its usefulness.

"To my mind upward filtration is the direction in which we should work, and from which we may expect the best results."

Dr. Symes then described an arrangement devised by himself which answers well. It is a cylindrical tin vessel, 22 inches high and 8 inches in diameter. A tin tray, about 1 or 1½ inch deep and 7 inches in diameter, is covered with paper, calico, flannel, or whatever is the filtering material, with the filtering surface downwards. A little leg, about 1 inch high, keeps this tray that distance from the bottom of the cylinder, and a tap passes through the rim of the tray and through the cylinder to convey the filtered fluid, which is passed through a long delivery-tube of indiarubber or glass, bent on itself. The sediment of the liquid to be filtered settles at the bottom of the cylinder, and thus does not interfere with the filtration. Such an apparatus, capable of holding about 3 gallons, costs 10s to 12s.

ARE COPPER SALTS POISONOUS?—In December last certain shopkeepers in Brussels were fined for selling or exposing for sale preserved foods, which, according to the evidence of an analytical chemist, M. Depaire, were contaminated with verdigris. One of the shopkeepers appealed, and his case has lately been heard. For him appeared Dr. Dumoulin, a professor in the Ghent University, who gave strong evidence against the theory of the poisonous nature of salts of copper. On that the Court acquitted the accused.

## Personalities.

THE will of the late Mr. Charles Edmund Hitchcock, formerly of Oxford, pharmaceutical chemist, but late of 3 Sandringham Gardens, Ealing, has been lately proved, the personality amounting to 21,000*l*.

MR. L. CALLAWAY, having sold the lease of his premises at 276 Oxford Street (which had previously been one of the dispensing branches of the General Apothecaries' Company) to the National Bank, has removed the handsome fixtures and stock to Bournemouth, where he will open an establishment in the early part of July, under the style of "The First Pharmacy."

AT the distribution of prizes in the Faculty of Medicine in connection with University College for the winter session of the academical year 1882-83, in May, the Dean, Professor Berkeley Hill, stated that 362 students, of whom 90 were freshmen, had attended the medical classes. The Atchison Scholarship (55*l*. per annum for two years), the Bruce medal, and other honours, were taken by Mr. W. A. Gostling, of Diss, son of Mr. T. P. Gostling, pharmaceutical chemist; and the President of the college, the Earl of Kimberley, who gave the prizes, expressed his personal satisfaction, as a native of the county of Norfolk, in conferring these rewards on a gentleman from Diss.

DR. DOBELL AND THE HOMŒOPATHIC DIRECTORY.—The Medical Council of the Royal Hospital for Diseases of the Chest passed the following resolution on March 13. Proposed by Dr. Herbert Davis, seconded by Dr. Goddard Rogers, and carried unanimously:—

The Medical Council of the Royal Hospital for Diseases of the Chest consider it incumbent on Dr. Dobell, as one of the consulting physicians, to obtain from Messrs. Thompson & Capper (the publishers of the "British Homœopathic Directory for 1883") a statement, for public advertisement, that his name was inserted in the "British Homœopathic Directory for 1883" by an error on their part.

In consequence, Dr. Dobell has published the subjoined correspondence, together with remarks which have appeared in the *British Medical Journal*, the *Medical Press and Circular*, *THE CHEMIST AND DRUGGIST*, and the *Lancet*:—

Strete Place, Bournemouth,  
January 3, 1883.

DR. Dobell presents his compliments to Messrs. Thompson & Capper, and requests that they will inform him on what authority they have inserted his name in their "Homœopathic Directory for 1883" (see pp. 14, 381), and what reparation they are prepared to make for the annoyance and injury they have caused him by this unwarrantable act.

4 Lord Street, Liverpool,  
January 6, 1883.

SIR,—In reply to yours of the 3rd, we can only apologise for the annoyance the mistake appears to have caused you, than which nothing could be further from our intention; and we will see that your name is erased from all the copies in hand.

We are, &c.,

THOMPSON & CAPPER.

DR. ADOLPH BAEYER, the discoverer of artificial indigo, celebrated the 25th anniversary of his doctorate at Munich on May 4. A large company of former and present pupils assembled, and several of the noted professors of Germany, including Graebe and Liebermann, the discoverers of alizarine; Victor Meyer, of Zurich; Dr. Emil Fischer, of Erlangen, director of the aniline factory, and others. The programme of the entertainment was cleverly designed to symbolise Baeyer's various chemical exploits, and prominent on the frontispiece was represented Baeyer's bitterest opponent, Kolbe, pelting him with his journal, Baeyer sheltering himself under the celebrated "umbrella formula." In the course of the entertainment some of the students gave an original chemical spectacle, the prominent notion of which was that the fairy "Indigofera" complains to her "Adolph" that he had not devoted himself exclusively to her, but had flirted with Eosin, Cœrulein, and others. But she gets contented when she is assured that all he has done and will do is purely for the advancement of science and industry. At the end of the festival the doctor was crowned by his students with a laurel wreath.



OWING to the death of Mr. Ching, of the firm of Ching & Wise, chemists, Launceston, the business will in future be carried on by Mr. W. Wise alone. Mr. Ching's name has been associated with the business for nearly a hundred years, but Mr. Wise has had the sole control and management for the last thirteen years.

### Suggestions.

LYCOPodium sprinkled over oiled silk prevents the fabric from adhering.

GLYCERINE, added to shoe blacking, will prevent the latter's drying in the box.

To detect adulteration in tea, burn the tea. Pure tea of any grade will not leave over 5 per cent. of ash, while the adulterated article will yield as high as 45 per cent.

HOLES may be drilled in glass, says the *Pharmacist*, by a good steel drill wetted with a saturated solution of camphor in oil of turpentine.

To preserve honey, E. Mylius, in *Les Mondes*, advises the addition of 1 per cent. of oxalic acid, which prevents fermentation without injuring the taste of the honey.

CARBOLATED IODOFORM.—M. Scherk, of Königsdorff, finds (*Journ. Pharm. Alsace-Lorr.*) 5 centigrammes of carbolic acid rubbed with 10 grammes of iodoform, with 1 or 2 drops of oil of peppermint, completely disguises the disagreeable odour of the former, and is much superior to cumarin and other means which have been recommended.

A "LABEL-VARNISH" is recommended by Mr. S. A. McDonnell, in "The Proceedings of the Californian Pharmaceutical Society," to be made by dissolving 1 oz. of white shellac in half a pint of ether, agitating the solution with 4 drachms of carbonate of lead; filter, returning the first portions of the filtrate until it passes perfectly clear.

AN excellent authority in medicine recommends a little common sugar as a remedy for a dry, hacking cough, and gives scientific reasons for it. If troubled at night or on first waking in the morning, have a little cup on a stand close by the bed, and take half a teaspoonful; this will be of benefit when cough syrups fail.

A CASTOR OIL SOAP for the preparation of soap liniment is recommended by Mr. M. S. Hammer, in "The Proceedings of the Californian Pharmaceutical Society," to be prepared as follows:—Saponify castor oil, Oij., with caustic potash, 6 oz., and water, Oij., by heating until a transparent mixture is obtained; then add a saturated solution of sodium chloride, stir till cool, allow to subside for a day, decant the liquid portion, cut in pieces, and dry for use.

A BEAUTIFUL green oil can be obtained, says C. Schmidt (Lübeck), in the *Pharm. Zeit.*, by boiling olive oil in which is contained a little freshly-cut green grass, together with a little water, and the herbs which it is required to extract in the oil, chamomiles, henbane, &c. About  $\frac{1}{2}$  lb. of water to 10 lbs. of oil, 3 oz. grass, and 1 lb. of the required herb is about the proportion. These are all boiled together for about three-quarters of an hour, or until the water has evaporated. When green grass cannot be obtained use instead a mixture of 10 parts of tumeric and 1 part of indigo.

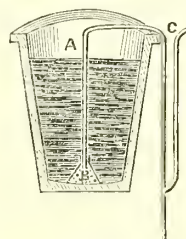
The following suggestions have been kindly sent to us by pharmacists:—

PRESERVATION OF EGGS.—If perfectly-fresh eggs are laid down in a solution of borax (8 oz. to 1 gallon of water) they will be found to keep perfectly for many months. The eggs must be new-laid, and it is better to use several small jars holding not more than a gross each, than one large vessel such as a cask. The liquor should cover the eggs, and the jar be kept in a cool cellar. A few of the shells will give way under the pressure caused by the endosmosis of the saline solution, but the inner film usually remains intact, and such eggs may be used for cooking, although tasting of borax, but such as have strong shells and are not more than two or three days old when laid down, will be found to taste as deliciously fresh at Christmas, when really fresh eggs can scarcely be purchased, as they did at mid-

summer. It is said that if, after steeping twenty-four hours in the borax solution, the eggs be taken out, dried, and packed in bran, they will keep good for months, but the writer has not been so successful with this as with the above-detailed method. When eggs have been kept in the ordinary way for a few days, evaporation takes place, and an ever-increasing air-cavity appears at the broad end, which is again filled when the egg is placed in water for some time. Thus eggs which feel warm to the tongue or transmit light at the broad end (indicating the presence of air) are not so suitable for preserving, because the borax solution required to displace the air is enough to give the egg its peculiar taste.

A NOVEL PERCOLATOR.—The following will be found a useful and easily-arranged form of percolator for making concentrated infusions, extract of poppies, and other preparations having a bulky marc, or requiring percolation with hot water:—

A is an ordinary brown stoneware mug; B, a tin funnel, perforated with many holes, placed at the bottom of the mug in the lowest part; C is a syphon-tube, reaching to the bottom of the mug inside the funnel.



The marc is packed into the mug, and the menstruum poured over the top; the liquid percolates through, and is drawn off from time to time by means of the syphon.

By replacing the perforated funnel with one not perforated, and tying a filtering medium over the top of the funnel, the arrangement may be used as an upward filter, on the principle given by Mr. C. Schacht in the *Pharm. Journal*, Vol. xiii, 938. Or the funnel may be replaced by a wooden perforated false bottom.—STEPHEN T. ELLIOTT, Preston.

A LITTLE roughly-powdered carbonate of ammonia sprinkled around the door-posts and on the floor about the legs of show-cases, &c., effectually prevents the urinary operations of perambulating curs. They don't wait for a second sniff, but take it for granted that a hyæna, or something strong, is in the neighbourhood.

### MEDICAL HUMOUR.

AN illustration of stinginess is cited by an Arkansas editor, who knows a man that talks through his nose in order to save wear and tear on his false teeth.

"HAVE you ever tried the faith cure?" asked a long-haired, sallow stranger, addressing a gentleman in a street car. "I have," was the reply. "Do you believe in it?" "I do." "May I ask, then, of what you were cured?" "Certainly; I was cured of my faith."

A STUDENT was being examined in anatomy, but failed to answer a very simple question. In an instant all his years of study became a blank. "John," exclaimed the professor to his servant, "go to the stable and bring me some hay for this —." "Bring enough for two," was the reply, before the enraged teacher could name the animal with long ears. The subsequent examination was severe, but it demonstrated that the student needed no hay.

SOUNDS FROM THE CONSULTING-ROOM.—"How long will it take you to cure me, doctor?" "Well, Mr. Blank, I think you can get back to your desk at the bank in about a month, but you will have to remain under treatment for several years." "But you mistake; I am not Mr. Blank the banker, but Mr. Blank the letter-carrier." "Oh, that alters the case. There is nothing the matter with you but a little biliousness. You will be well in a month!"

**MEDICINE FOR COSTLINESS.**—"What's the matter with the baby?" "Shure, it's very *costly*, it is, and my mistress wants something to cure its *costliness*." The doctor does not see how he can treat the disease without making the baby more costly still.

**DYNAMISED MEDICINE.**—"Doctor," said a fashionable young lady to a disciple of Hahnemann, "I believe in your skill, but I am afraid to take these medicines with their terrible names; can't you give me something milder?" The doctor considered a moment, and then, inspired by a flash of genius worthy of the master, answered, "Buy a cow." "A cow! what for?" "I will drugg the cow and you shall drink her milk." This was done; in six weeks the lady was cured—but the cow was dead.

THAT DREADFUL DOCTOR!  
(Ingoldsby applied.)

He warns us in eating, he warns us in drinking,  
He warns us in reading, and writing and thinking;  
He warns us in football, footrace, eight-oar "stroking,"  
He warns us in dancing and cigarette-smoking;  
He warns us in taking champagne, and canoeing;  
He warns us in wearing red socks, and shampooing;  
He warns us—of drains—in our snug country quarters;  
He warns us—of fever—in mineral waters;  
He warns us in—everything mortal may mention.

But—what gives rise  
To but little surprise—

Nobody pays him the slightest attention!

—Punch.

## Foreign and Colonial.

**PHARMACISTS AND POPULATION IN GERMANY.**—In Berlin the proportion of pharmacists to population is 1 to 16,519, in Breslau 1 to 12,423, in Leipsic 1 to 10,000.

**A CAMPAIGN.**—The proprietors of Hostetter's Bitters have commenced 100 suits in the United States against different parties for infringing their trade-mark, and in other ways counterfeiting their goods. Temporary injunctions have been asked for.

**THE Fire Department of New York City** has served a notice on pharmacists, informing them that they should apply for a permit to sell collodion, nitro-glycerine, nitrate of soda, nitrate of silver (?), ether, phosphorus, and other explosive compounds.

**LYDIA PINKHAM**, a well-known patent-medicine proprietor, whose advertisements with her portrait have figured prominently in the American papers for the past few years, died at Lynn, U.S., last month, at the age of 64. She began by manufacturing medicine in a tea-kettle, and in a few years built up a business of \$300,000 a year. She spent \$180,000 per annum in advertising.

**A NARROW ESCAPE.**—A gentleman, the other night, was taken painfully ill with cramps. He hastily sent for his doctor; but, as luck would have it, the doctor was not at home, and so the call was not answered. However, the patient was well by morning, and on his way down town, chancing to meet a friend, he referred to his sufferings of the night, and then facetiously remarked, "I believe I owe my life to that doctor."—*Philadelphia Paper*.

**A CHICAGO DRUG-STORE.**—The Chicago *Architect and Builder* says decoration has reached in that city a standard of excellence never before attained. It is apparent in business establishments as well as residences. A new drug-store is described as follows:—"The ceiling is a beautiful piece of work, being finished in panels of pale blue interspersed with fern-leaves in gold. These panels are broken at the sides and ends with triangles of black velvet edged with gold, in which are eight new and original designs in hand-painted work. An elegant English frieze in gold similarly treated forms a striking feature. The new and tropical designs and the combinations of colours here introduced, and studied with a view to harmonising with electric light, produce a beautiful effect under its strong, bright rays."

## FRENCH CORRESPONDENCE.

— M. Chevreul, now 97 years of age, has commenced a new course of lectures on organic chemistry at the Museum of Natural History. Speaking of some slight phenomenon, he said, the other day, "This fact was first mentioned to me in 1804, by a Leipsic student, named Schamberger or Schomberger, I am not sure which; it is curious, but I am beginning to lose the memory of names."

— The anti-vivisection crusade in France is likely to be of a more decidedly militant character than in England even. M. Brown-Sequard, at the Collège de la France, in a physiological lecture, was binding a young monkey with a view of vivisectioning it, when the animal, with an insufficient respect for the dignity of science, screamed in a manner to annoy the learned professor, who intimated to his audience that he would render him voiceless by cutting the vocal cords. Thereupon a young lady, fashionably dressed, walked up to the lecturer and struck him on the face with her parasol. She was removed by the police, but she claimed, not unreasonably, that the "law Grammont" gave her the right to interfere as she did. Nothing more has been heard of the assault, and the medical profession will hardly be unwise enough to move the sympathies of the public by prosecuting this Charlotte Corday of physiology.

— Another great exhibition is proposed for Paris for 1889, to celebrate the centenary of the Revolution. A meeting in favour of the project has been held under the presidency of the Minister of Commerce.

— In the shop-window of M. Hauchedome, naturalist, in the Rue de la Croix-de-Fer, at Rouen, is displayed a sponge, which is probably the largest of the fine Turkey kind which has been obtained. It is of an oval cup-shape, and measures 2.20 metres in circumference. Quite dry and free from sand, it weighs 2,400 grammes (over 5 lbs.). It has been sent from Smyrna.

— The prize of 300,000f. to the discoverer of a means of destroying the phylloxera without injuring the vines is offered for another year. The Commission appointed to examine proposals has received during the past year 185 claims. Most of the schemes suggested are repetitions of past failures, while the usual proportion of fantastic ideas recurs. One individual advocates a method of applying electricity to the parasite, another proposes dynamite, a third indicates a form of prayer, which he believes would be efficacious; certain charms are suggested by several, and one man professes to have discovered that by building a low wall round the vine the phylloxera can be surely kept at a distance.

— Madame Sarah Felix, the inventor of the "Eau des Fées," a well-known cosmetic, having lately died, a lawsuit has occurred respecting the disposal of property worth 6,000f. a year, which had been left to her by her sister Rachel, the actress, and which was claimed on the one side by the natural children of Rachel, and on the other by Leah and Dinah, surviving sisters of Sarah. The Court decided the suit in favour of the sisters.

— A French patent has been taken for a so-called "Electric Flannel," by Dr. Claudat, who affirms that it is efficacious against rheumatism. This flannel contains, per kilogramme of wool, 115 grammes of oxides of tin, copper, zinc, and iron. A series of threads of the tissues, saturated with these metallic products, are woven alternately with the ordinary threads. The flannel so prepared forms a dry pile. M. Drincourt, Professor of Physics at the Rheims Lyceum, and M. Portevin, of the Polytechnic School, have proved, independently, by very precise experiments, that Dr. Claudat's flannel liberates electricity, either by simple contact, or, better, in contact with the products of transpiration when the tissue is applied to the body.

— Two men have just been sentenced by default to two and three years' imprisonment in Paris for selling bogus diplomas of an Academy of Rome which does not exist, and for which they charged from 30f. to 100f. Among the victims was a former secretary to the President of the Republic, M. Bornibus (the French Colman), M. Bravais (the French Holloway), a General, and a fashionable portrait painter.



A PHARMACEUTICAL ALLIANCE.—The following account of an interesting marriage in Paris has been sent to us by a French correspondent. We translate it almost literally, without attempting to convert the Gallic style into more sober Anglo-Saxon.

"Among the events interesting to the chemical and pharmaceutical world which have occurred in France during the month of May ought to be mentioned a marriage remarkable not only for its intrinsic brilliance, but equally on account of the reputation of the two great houses which it links. We refer to the marriage of Mdlle. Marie Rigaud with M. Armet de Lisle.

"To speak first of the bridegroom. M. Armet de Lisle is the son of the man who has acquired a considerable fame as a manufacturer of sulphate of quinine, and who has combined into one firm the factory of Pelletier, the discoverer of the alkaloid, that of Delondre and Levaillant, and his own, and whose product, known to commerce under the name of the quinine of '3 cachets,' is of incontestable purity, and is as highly esteemed in England and in the English Colonies as it is in France.

"The bride, Mdlle. Marie Rigaud, represents by her father a great pharmaceutical house, founded only about twenty years ago, and now reaching out by its enterprise to the whole of the world.

"M. Rigaud was a pupil in the retail establishment of the famous M. Dorvault, in the Rue de la Feuillade, and he subsequently became associated with another of M. Dorvault's assistants in the business of Grimault & Cie., which was mainly organised by him. This house has since become the firm of Rigaud & Dusart, M. Dusart being the proprietor of the products of lacto-phosphate of lime, which have attained considerable popularity in medicine.

"Fortune has rewarded the energy of M. Rigaud. The factory belonging to the firm occupies at Neuilly-sur-Seine a superficial area of 6,000 metres, covered with buildings. Some 400 male and female workers are employed, and some idea of the extent of the business done may be gathered from the fact that the prices of the articles produced vary from 4*d.* to 2*s.*, and that the total sales reach a value of about 6,000,000*f.* annually.

"M. Rigaud's present fortune is said to amount to some 10,000,000*f.* He owns considerable landed property at Paris and Neuilly, a princely park at Maisons-Lafitte, and hunting lands adjoining those of the Messrs. Rothschild.

"The newly-married pair begin housekeeping on a capital of about 2,000,000*f.* M. Armet de Lisle is the manager of the quinine factory at Nogent-sur-Marne, the greater part of which he owns along with his two brothers-in-law, shareholders in France, Italy, and Germany possessing the remainder.

"The religious ceremony was celebrated at the church of St. Augustin, which was not large enough to accommodate all the friends of the two families, who to the number of 2,000 crowded to witness it. After the marriage M. & Mme. Rigaud held a reception in their splendid hotel of the Rue de la Bienfaisance, where a lunch had been prepared. They were assisted by their elder daughter, Mme. Surmont, the wife of a well-known stockbroker. The statuesque beauty of Mme. Surmont, as well as that of her mother, brilliant with youth and elegance, was universally admired.

"After lunch the guests visited the salons of the hotel, and admired the magnificent wedding presents and famous paintings, including fine specimens of Delacroix, Diaz, Fortuny, Rousseau, Daubigny, and others, as well as the monumental specimens of Chinese and Japanese bronzes which M. Rigaud possesses.

"In referring to this marriage it may be mentioned that M. Rigaud has suggested to MM. Armet de Lisle & Co. to prepare the sulphate of quinine in the form of 'perles' in a state of perfect purity, and without any mixture. In this form there will be no bitterness, the product will be preserved indefinitely, and will not harden like pills. The medical profession, who since the news of the falsification of the quinine supplied to the hospitals have been very suspicious, are likely to give a favourable reception to this new mode of administering Pelletier's quinine."

"ARE you feeling very ill?" asked the physician. "Let me see your tongue, please." "It's of no use, doctor," replied the patient: "no tongue can tell how bad I feel."



### THE SPRING-LOCK CAPSULE STOPPER.

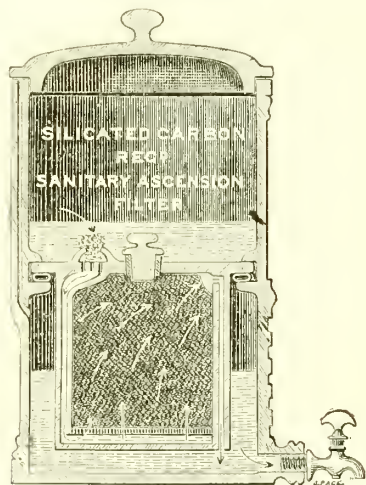
If the "Spring-Lock" Capsule Stopper turns out as useful as it promises to be its owners have a good property. It is simple in action, but difficult to describe or figure intelligibly. A strong metal capsule fits over the neck of the bottle. The bottom of the capsule is lined with a disc of cork, which entirely covers the mouth of the bottle. When first applied it is pressed firmly on; the cork disc completely closes the orifice, and as soon as it is in place two strong wire points slip into a slot on the neck and retain it permanently. To open it the wire handle is raised, and two small projections force out the wire points, and the whole stopper lifts off with ease. At present only two sizes are made, beer and pickle bottle, but the principle can be universally adapted. Some beer opened in our presence effervesced vigorously, showing that the stopper is thoroughly air tight. For beers, pickles, perfumes, and especially for effervescent salines, the new stopper seems well fitted. The proprietors intend to apply it to aerated waters, as their experiments with beer have proved so successful. It is being worked by the Duplex Lever Capsule Co. (Limited).

### TIKHEEL.

THE old-established and respected firm of Clarke, Bleasdale, Bell & Co., of York, have recently introduced and extensively advertised "Tikheel" as a remedy for neuralgia, toothache, and nervous and sick headache; and their success so far has been remarkable, the sale of Tikheel, they tell us, having reached the rate of over 20,000 bottles in the first twelve months. Tikheel, we are told, is entirely different from anything yet brought before the public. Messrs. Clarke & Co. inform us that their experiments—in which they were assisted by medical friends—extended over five years, and they assert that their medicine may be trusted to cure ninety-five cases out of a hundred of ordinary facial neuralgia, and at least three out of four cases of toothache, even if proceeding from a decayed tooth. Tikheel is also said to cure every case of the distressing symptomatic toothache of pregnancy, in which condition it may be taken with perfect safety. In nervous and sick headaches, also, Tikheel appears to exercise an immediate and almost certain beneficial influence. We cannot undertake to verify all the statements brought before us respecting new medicines, but we may say that Messrs. Clarke, Bleasdale & Co. have, in this instance, sent us details, testimonials for our inspection, and other means to form a judgment, which lead us to conclude that they really have introduced a medicine of special value. They think it will be of great service in curing the neuralgia so prevalent in hot and damp countries, and they urge on our notice the important fact that the medicine is not poisonous in any possible dose. Messrs. Savory & Moore, of London, and Messrs. Duncan, Flockhart & Co., of Edinburgh, are among the special agents for Tikheel, and we understand that the proprietors have engaged Mr. Linay—for many years with Messrs. Barclay—to introduce it in the southern half of England, where their own representatives do not travel. The firm have just brought out a very effective show-card representing the dentist defeated by Tikheel, a lady holding a bottle of the remedy pushing him aside just as he is about to apply his cruel weapon on another young lady.

## IMPROVED SILICATED CARBON FILTER.

A NEW adaptation of the silicated carbon filtering medium has been made in the filter illustrated in the subjoined engraving. The new apparatus offers increased efficiency, combined with rapid action and a greater facility of cleansing. This filter acts on the ascension principle—the water being freed from grosser impurities by first passing through a coarse filtering medium, and afterwards being thoroughly purified by passing upwards through silicated carbon. The filtering medium is contained in an inner vessel, which may be lifted out by giving it a half turn, and the interior is then entirely accessible for cleaning. This latter point is of much more importance than is usually sup-



posed. No reliance should be placed upon filters which are said to be "self-cleaning," or never to require cleaning at all. Obviously, if a filter does its work properly—that is, removes impurities from water—those impurities must collect on the filtering medium, and require to be cleaned away from time to time. If this is not done they will be reabsorbed by the water, which thus becomes more impure than before. Persons who value a glass of pure water will not mind taking a little trouble to clean a filter; but the simplicity of the operation in the apparatus under notice reduces the trouble to a minimum, and promises to greatly popularise the filters made by the Silicated Carbon Com-

## LIQUID CARBONIC ACID AND AERATED BEVERAGES.

WE have previously, November, 1882, page 435, mentioned a carbonic-acid pump in which the motor was liquid carbonic acid, and we suggested that the apparatus might prove suitable for other purposes. Apotheker Volk, in Ratzburg, has made a series of practical experiments with the liquid carbonic-acid apparatus for charging water and other liquids with carbonic-acid gas, and finds that it affords the cleanest, most convenient, and best method of preparing aerated drinks. The advantages are obvious: The manufacturer of aerated beverages who should use liquid carbonic acid would get his carbonic acid perfectly pure and free from air, and containing within itself the pressure necessary for charging the bottles, whereby all the intricate, expensive, and troublesome apparatus hitherto pertaining thereto would be avoided. In a paper published in a German mineral-water journal, Mr. Volk expresses the opinion that when the production of the apparatus shall be on a suffi-

ciently large scale, the manufacture of aerated waters by their means will probably be cheaper, and certainly not dearer, than it is under the present system, so that, considering the convenience in working, there is some prospect of a change in the aerated-beverage industry.

## NORINA'S EMOLLIENT.

WE are obliged to the inventor of this new cosmetic for sending us a sample. The preparation is calculated, we are told, to produce a surpassing loveliness. To experiment on ourselves would be hardly a fair test. Our wrinkles are too deep and our skin too withered to hope to ever restore it to the surpassing loveliness of its prime. But we commend it to the sex whose mission it is to be beautiful, and if any of them ask a chemist for the article the latter will be able to get it from Messrs. Newbery's.

## HYGIENIC SOAP.

MESSRS. PATON & CHARLES, the eminent soap-makers, have registered the title of "Hygienic Soap" for an article very attractively got up, and combining detergent with antiseptic properties. The presence of a tar derivative in the soap is not doubtful, but this is to some degree covered by other odours of an aromatic character. Dr. Hassall's suggestion that the suds of such a soap as this may be advantageously used as a disinfectant for drains, &c., is worthy of note, especially during the summer months. We do not doubt that soaps of this sort are promotive of health.

## ABSORBENT COTTON-WOOL TISSUE.

WE take the following notice from the *Lancet*:—Messrs. Robinson & Son, of Wheat Bridge Mills, Chesterfield, have, at the suggestion of Mr. Sampson Gamgee, made a material for surgical dressings, to which the name of absorbent cotton-wool tissue has been given. It consists of very fine and pure absorbent cotton between two layers of fine absorbent gauze. It is sold in rolls of various widths, like lint, or cut into sheets of different sizes. This tissue is very light, perfectly smooth, powerfully absorbent, and of great elasticity. It can be applied to any surface with the greatest ease, and has very many uses in surgery. Thus, as a means of applying elastic compression, there is nothing more convenient than a bandage evenly applied to a limb or the trunk over a layer of this tissue; it makes an excellent absorbent dressing for wounds, and is a padding for splints which can at once be applied quite evenly. Mr. Gamgee has also shown that it can be utilised for the application of plaster-of-Paris splints. For example, to apply such a splint to the leg, all that is needed is to wrap the limb in a layer of the dry tissue, then take a similar piece of the tissue and soak it in plaster-of-Paris "cream," and fasten it to the limb by a light bandage; extra strength can be obtained either by another layer of the soaked tissue, or, much better, by laying thin narrow strips of deal veneer between the layers of the tissue. In this way a plaster splint is very readily applied, made to fit accurately to the part, and yet be of the minimum weight. The tissue is sold also by Messrs. Southall & Barclay, impregnated with any of the various antiseptic agents. We anticipate that this tissue will become a very favourite dressing material when its many great advantages come to be generally known.





# IMPORTANT MINERAL-WATER CASE.

In the case of Barrett & Co. v. White & Son, which came before Mr. Justice North, in the Chancery Division of the High Courts Justice, last month, the plaintiffs, who carry on business as mineral-water manufacturers at Vauxhall, sought to restrain the defendants, who carry on business at Camberwell, from sending out to their customers aerated water in Lamont's patent bottles, which plaintiffs claim the sole right to use. In the course of business their bottles got returned to other manufacturers, and this action was brought to try the right of persons who obtained them in that way to refill and send them out again with aerated waters of their own manufacture.

Evidence was given on the part of the plaintiffs to the effect that they charged when the bottles first went out *ls.* a dozen, a price less than the cost of the bottles; and the defendants proved that they attached their own label to all the bottles they sent out; but plaintiffs said that if the labels came off the general public might be deceived.

Mr. Justice North held that the plaintiffs had sold their bottles; and the defendants having become the owners of them were consequently entitled to make any lawful use of them. They were entitled to use them for the purpose of putting their own soda water in them and selling it, provided that they did not do so in a manner which would lead the public to believe that the soda water was made by the plaintiffs. If the defendants had sent out these bottles without their own label, or if the plaintiffs' mark had been a delibe one, which the defendants had not removed, the case would have been different; such conduct would have been an indication of a fraudulent intention; but the defendants had done all that was possible to show that the goods were their manufacture, and he must give judgment for them.

## AN OPIUM CASE.

In the Court of Appeal, on May 28, the Master of the Rolls and Lords Justices Lindley and Fry heard the case of Cassaboglou v. Gibb, Livingston & Co. The plaintiff, a merchant in London, inquired by telegram of the defendants, who are commission merchants at Hong-Kong, at what price they could buy a certain kind of opium. The defendants replied, and the plaintiff ordered them to buy certain cases of the opium described. The defendants purchased for the plaintiff what they believed, though erroneously, as it turned out, to be the opium ordered. The opium turned out to be of inferior quality, and the plaintiff rejected it after having paid the drafts. It was admitted that the kind of opium wanted could not have been purchased at Hong-Kong. The plaintiff claimed the difference between the value of the goods of the description sold and of those actually sent, thus treating the relation between himself and the defendants as that of vendor and vendee. The defendants paid 300*l.* into Court. Mr. Justice Manisty and Mr. Justice Williams held that the plaintiff was only entitled to recover his actual loss, and the Court of Appeal now affirmed the judgment on the ground that the relationship of vendor and vendee did not exist between the parties, but that of principal and agent, and that for a breach of duty by an agent the principal can recover only the actual damage suffered by reason of the breach. Their Lordships were of opinion that the sum paid into court covered the loss suffered by the plaintiff.

**ROBBERY OF QUININE.**—It has been discovered at the Milan Chemical Factory, says a correspondent of the *Pharm. Zeitung*, that some 4,000*l.* worth of quinine has been stolen by certain of the employes.

## Obituary.

**BROOKS.**—On May 24, Mr. William Hutchings Brooks, chemist and druggist, Shadwell, E. Aged 49 years.

**CURRY.**—On February 3, Mr. Nicholas Curry, chemist and druggist, Spennymoor, Durham. Aged 24 years.

**DAVIES.**—On May 27, Mr. John Hampton Davies, chemist and druggist, Kensington, Liverpool. Aged 33 years.

**EVANS.**—On April 23, Mr. Richard Morgan Evans, chemist and druggist, Portb, Rhondda Valley. Aged 39 years.

**HADFIELD.**—On May 20, Mr. Charles Hadfield, chemist and druggist, Mill Street, Macclesfield. Aged 68 years.

**HUBBARD.**—On April 5, Mr. Felix Padman Hubbard, chemist and druggist, Walsall.

**LEETE.**—On May 15, Mr. William Waples Leete, chemist and druggist, Herne Hill. Aged 46 years.

**MITTLAND.**—On April 24, Mr. John Maitland, pharmaceutical chemist, Chester Place, Hyde Park Square, W.

**THOMPSON.**—On May 20, Mr. Thomas Tomomson, pharmaceutical chemist, Market Place, Richmond, Yorkshire. Aged 61 years.

**WALPOLE.**—On April 23 Mr. William Walpole, chemist and druggist, White Lion Opening, Great Yarmouth. Aged 75 years.

**WHITE.**—On May 27, Mr. George Henry White, chemist and druggist, Mountain Ash, Glamorganshire. Aged 44 years.

## MARRIAGE.

ON May 26, at Christ Church, Lancaster Gate, by the Rev. W. Boyd Carpenter, Canon of Windsor George Albert Walpole, L.K. and Q.C.P., &c., eldest son of George Walpole, of Castleknock, Sirokestown, Ireland, to Margaret, second daughter of Frederick Andrews, pharmaceutical chemist, 34 Leinster Terrace, London, W.

## Trade Notes.

THE shares in Du Barry & Co. (Limited) were not allotted, as a sufficient response was not made to justify the formation of the company.

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**THE UNIVERSAL INHALER.**—Messrs. Bourne, Johnson & Latimer have brought out a stoneware inhaler, to be sold at a low price. The directions for use are burnt in with the label, and the whole design is neat and taking.

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**FOSTER'S PEARL-COATED ROUN PILLS**, a sample of which has been sent to us, may be mentioned as a cheap and saleable article. A box containing a dozen doses, pearl coated, got up to sell for 2*d.*, would surely break down the parsimony of anyone who might keep poultry of any sort. The agents' addresses will be found in Mr. Foster's advertisement.

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WE have received a supplementary catalogue of druggists' sundries from Messrs. Bourne, Johnson & Latimer, describing, among other things, the multitudinous and ingenious druggists' sundries which this firm have brought out since the issue of their general catalogue. As a specimen of one of these they send us a new 6*d.* box of odoriferous cachous for the breath, and giving both quantity and quality for the money.

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MR H. FAVARGER, of 75 Turnmill Street, has published a new illustrated catalogue of aerated-water machinery and accessories, which will be found very useful to those in the trade or who have any idea of entering it. This catalogue contains 109 quarto pages, with several hundreds of drawings. Full particulars are given of the Mondolot machines, for which Mr. Favarger is the sole agent, and also of various other machinery, gas-engines, ice machines, syphons, &c., sold by him.

THE ZOEDONE COMPANY inform their shareholders that they have settled their dispute with Messrs. Barrett & Co., the arrangement being apparently that the company withdraw their claim on the old account, while Messrs. Barrett become sole licensees for London and a radius of 15 miles, and agree to pay royalty on a minimum quantity of 80,000 pints for a period of about five years. This, it is said, will yield the company at least 9,500*l.* during the currency of the agreement.

\* \*

HOP BITTERS.—A temperance brother having attempted in the *Christian World* to discredit the worth of Hop Bitters as a means of reclaiming drunkards, on the ground that the remedy itself contains a large proportion of alcohol, the company write in the paper that they will furnish the gentleman with the medicine and give him 50*l.* if in two months' trial he does not cure the worst case he knows if he follows their instructions. They incidentally state that the preparation has been introduced into the United States eleven years, and that the sale there now averages 60 gross a day.

\* \*

A WHOLESALE FIRM'S BAD DEBTS.—During the sittings of the Grand Committee on Trade considering the Bankruptcy Bill, Sir H. Peek gave some particulars of his own experience of bad debts, Wales paying the least, England next, Ireland next, and Scotland paying the best dividend. He added that he was a careful trader. The particulars of his experience of bad debts in eight years were that England paid 6*s.* 0*d.* in the pound, Wales 5*s.* 0*d.* in the pound, Ireland 7*s.* 7*d.* in the pound, and Scotland 9*s.* His loss in England was 16,380*l.*, Scotland 6,552*l.*, Wales, 1,483*l.*, and Ireland 984*l.*

\* \*

MR. HEINRICH HAENSEL, of Pirna-on-the-Elbe, sends us a sample of an *essentia lupuli* which he manufactures, and which it is claimed is equivalent to the hops themselves, weight for weight. This essence will cost something like from 4*m.* to 5*m.* per kilo. at the present price of hops; and, while only practical brewers can form a satisfactory opinion as to its merits, it would seem to us that an essence extracted pharmaceutically by the most perfect apparatus must be economically superior to the essence which is obtained in beer by the methods ordinarily employed. Mr. Haensel's essence has a flavour of the hop as fine as can be attained.

\* \*

NEW COMPANY.—ELECTROPATHIC ASSOCIATION.—To acquire from the Pall Mall Electric Association, of 21 Holborn Viaduct, the right to manufacture and sell in the United States their patent and registered electropathic belts, galvanic generators, and other appliances, and to use their trade-marks. Purchase consideration: The allotment of 1,000 fully-paid shares, and one-third of any increased capital. Capital: 15,000*l.*, in 5*l.* shares. Signatories (with one share each): G. L. Baker, 21 Holborn Viaduct; L. Graff, 6 Fenchurch Street Buildings; J. A. Winter, Bridgwater; H. Barrett, Dulwich; C. G. Elers, 91 Holland Road, W.; F. R. Nevill, Llanelly; W. Y. Nevill, Llanelly. Directing qualification: The holding of stock of the value of 500*l.* Remuneration: 5 per cent. of net profits. Registered May 17, 1883.

\* \*

THE annual meeting of the Liebig's Extract of Meat Company (Limited) was held at the Cannon Street Hotel on the 7th inst. The report showed a net profit on the year's work of 67,254*l.*, out of which a dividend of 7½ per cent. was declared, which, with an interim dividend of 2½ per cent. already paid, makes the usual 10 per cent. for the year, free of income-tax. The sum of 15,000*l.* was carried to reserve, and 4,815*l.* carried forward. The revenue of the company is derived from hides, tallow, horns, hair, and fertilising material, as well as from extract of meat. The chairman (Mr. Charles Günther) pointed out that the profit was a little reduced by higher prices for cattle, but it had made no difference in the dividend, and this cause was only temporary. He mentioned that since the commencement the company had slaughtered 2,100,000 head of cattle.

MESSRS. MCKESSON & ROBBINS, of New York, have favoured us by sending through their agents, Messrs. Burroughs, Wellcome & Co., a copy of a new illustrated catalogue of druggists' sundries and surgeons' instruments, which they have just published. The idea of the work has probably been suggested by one of a similar character published by an eminent English firm, and, as in that case, the price-list is published in a volume separately from the illustrations. The drawings, engraving, and printing are all executed in as fine a style as the various arts admit, and the whole is produced on paper and between covers in a manner regardless of expense. Some lithographed pages, showing sponges in their natural colour on a black ground, are exceedingly beautiful.

We have also received a catalogue of druggists' sundries and shopfittings from Tallada Hermanos, of Barcelona. This also is a remarkably handsome catalogue, containing a number of pages, lithographed in colours, illustrating various styles of shop-bottles.

From Mr. Van Heyden, of Dresden, we have to acknowledge a prettily-produced little pamphlet on salicylic acid and its virtues (in German), which has been prepared for distribution in the Hygiene Exhibition at Berlin.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

Applications for Letters Patent:—

- Alpha naphthol, &c.**—No. 2300.—J. Levinstein, of Manchester, chemist. Improvements in the manufacture of alpha and beta naphthol. Dated May 7, 1883.
- Ammonia**—No. 2269.—W. J. Cooper, of Westminster Chambers, London, analytical chemist. Improvements in the obtaining of ammonia from coal gas. Dated May 29, 1883.
- Ammonia Salt**—No. 2519.—G. Chapman, of Glasgow, manufacturing chemist. Improvements in obtaining ammonia salt from gases generated by the combustion or destructive distillation of coal or other bituminous substances. Dated May 21, 1883.
- Artificial Fertilisers**—No. 2391.—J. R. Young, junior, of Norfolk, Virginia, United States. Improvements in artificial fertilisers and in methods of manufacturing the same. Dated May 30, 1883.
- Caramels**—No. 2713.—H. Roberts, of Greenwich, manufacturing confectioner. Improvements in the manufacture of "caramels" and apparatus therefor, the apparatus being also applicable for other purposes. Dated May 31, 1883.
- Cleaners for Feeding-bottles, &c.**—No. 2,283.—F. Cook, of Stamford Hill, London. Improvements in cleaners for the tubes and other portions of feeding-bottles and the like. Dated May 4, 1883.
- Colouring Matters**—No. 2411.—J. Erskine.—A communication from C. Rampff, of Elberfeld, Germany, manufacturing chemist. Improvements in the manufacture of colouring matters suitable for dyeing and printing. Dated May 12, 1883.
- Colouring Matter**—No. 2591.—C. D. Abel.—A communication from Messrs. L. Durand and Huguenin, of Bâle, Switzerland. An improved manufacture of colouring matter. Dated May 24, 1883.
- Decomposing and Transforming Fats**—No. 2349.—A. Marix, of Paris. A process of decomposing and transforming fats or fatty substances into fatty acids and glycerine. Dated May 9, 1883.
- Dentistry**—No. 2545.—S. Pitt.—A communication from C. M. Richmond, of New York. Improvements in dentistry. Dated May 22, 1883.
- Distilling apparatus**—No. 2394.—A. Marix, of Paris. Improvements in distilling apparatus. Dated May 11, 1883.
- Dyes**—No. 2296.—G. A. Bang.—A communication from G. A. Dahl, E. Dahl, and R. Dahl, of Barmen, Germany. Improvements in the manufacture of dyes. Dated May 5, 1883.
- Evaporating Salt Brines, &c.**—No. 2333.—W. T. Whitman.—A communication from H. Frasc, of Cleveland, Ohio, United States. Improvements in methods of and apparatus for evaporating salt brines and other solutions, and for collecting and removing the salt or other crystals precipitated therefrom, and for other purposes. Dated May 8, 1883.



- Explosives.**—No. 2637.—W. R. Lake.—A communication from J. Pichler, and A. Fels, both of Vienna-Neustadt, Austria. Improvements in the manufacture of explosive materials, and in apparatus therefor. Dated May 26, 1883.
- Extracting Gelatine, &c.**—No. 2680.—C. D. Ekman, of Sweden. Improvements in the manufacture of gelatine, fat, and similar substances from bones, hides, fish, and other animal matter. Dated May 30, 1883.
- Feeding bottles.**—No. 2559.—A. Horne and J. Maneor, both of Liverpool. Improvements in or appertaining to feeding-bottles for babies. Dated May 22, 1883.
- Filling, &c., Bottles.**—No. 2419.—F. Foster, of Forston Street, Hoxton, London. Improved machine for filling, corking, and syringing bottles. Dated May 12, 1883.
- Food.**—No. 2647.—W. R. Barker and A. L. Savory, both of New Bond Street, London. Improvements in the manufacture of food for infants and invalids. Dated May 28, 1883.
- Frames for Bottles, &c.**—No. 2288.—J. B. Walker, of Sheffield. Improvements in the construction of frames or stands for holding bottles or other receptacles or articles. Dated May 5, 1883.
- Fuller's Earth.**—No. 2582.—C. R. Dames, of Bath. Improvements in the method of and machinery or appliances for the manufacture of fuller's earth. Dated May 23, 1883.
- Hydrate of Strontia, &c.**—No. 2648.—C. F. Claus, of Mark Lane, London, chemist. Improvements in the manufacture of hydrate of strontia and hydrosulphide of sodium. Dated May 28, 1883.
- Indigo.**—No. 2486.—W. Brookes.—A communication from T. Holliday, of Houleme, near Malaunay, Seine Inferieure, France, manufacturing chemist. Improvements in the treatment of indigo for use in dyeing and printing. Dated May 18, 1883.
- Isinglass.**—No. 2760.—L. A. Groth.—A communication from C. A. Sahlström, of Jönköping, Sweden. A new or improved process for preparing fluid isinglass from the bladders of cod, haddock, herring, and other fish. Dated June 4, 1883.
- Laundry Blue.**—No. 2524.—M. H. and T. L. Hargreaves, both of Cleveland Street, Hull, and J. E. Hargreaves, of Freshwater, Isle of Wight. Improvements in the manufacture of laundry blue. Dated May 21, 1883.
- Monosulpho Acid of Anthraquinone.**—No. 2239.—I. Levinstein, of Manchester, chemist. Improvements in converting anthraquinone into a monosulpho acid of anthraquinone, also applicable for treating other organic compounds. Dated May 7, 1883.
- Phosphates of Earths, &c.**—No. 2425.—C. Pieper.—A communication from C. Scheibler, of Berlin, professor of chemistry. Improvements in the treatment of phosphatic slags for the production of phosphates of earths and manganese oxides of iron. Dated May 15, 1883.
- Purifying Alkaline Solutions.**—No. 2734.—T. Glover, of Runcorn, Cheshire. An improved method or process for the purification of alkaline solutions. Dated June 1, 1883.
- Purifying Glycerine.**—No. 2326.—H. J. Hadden.—A communication from C. Moldenhauer and Dr. C. Heinzerling, of Frankfurt-on-the-Main. New or improved processes for purifying glycerine. Dated May 8, 1883.
- Refining Soap.**—No. 2456.—J. Longmore, of Liverpool. Improvements in refining or decolouring soap made from cotton-seed oil, or from other oil containing extractive colouring matter, and in valuable products obtained therefrom. Dated May 16, 1883.
- Separating and Utilising Alkali.**—No. 2469.—J. Lane, of Elland, Yorkshire, manufacturing chemist, and D. V. Stewart, of Manchester, chemical manufacturer. Improvements in the separation and utilisation of the alkali used in the extraction of crude carbolic acid from coal tar or coal-tar oils. Dated May 17, 1883.
- Soap.**—No. 2707.—E. A. Brydges.—A communication from F. O. Spielhagen, of Berlin. Improvements in the manufacture of soap. Dated May 31, 1883.
- Starch.**—No. 2703.—J. Polson, corn-flour and starch manufacturer, and J. M. Harley, both of Paisley. Improvements in the manufacture of starch. Dated May 31, 1883.
- Stopping-bottles.**—No. 2271.—J. H. Vane, of Uitenhage, Cape Colony. Improvements in stoppers for bottles containing aerated liquids or liquids under gaseous pressure. Dated May 4, 1883.
- Stopping-bottles.**—No. 2512.—A. B. Vane, of Uitenhage, Cape Colony, physician and surgeon. Improvements in stoppers and valves for bottles containing aerated liquids or liquids under gaseous pressure, and an instrument or apparatus for facilitating the adaptation of the said stoppers to the said bottles. Dated May 19, 1883.
- Treating Celluloid, &c.**—No. 2577.—C. G. Hammersley.—A communication from F. J. Lynam, of Santiago, Chili, doctor of medicine. Improvements in the treatment of celluloid, rubber, or other non-metallic bases used for dental purposes. Dated May 23, 1883.
- Stopping-bottles, &c.**—No. 2581.—J. G. Van-der-Kaa, of Australian Avenue, London. Improvements in stoppering bottles, jars, and like vessels. Dated May 23, 1883.
- Stopping Bottles.**—No. 2599.—W. W. Macvay and R. Sykes, of Castleford, Yorkshire. Improvements in or connected with the stoppering bottles for containing aerated liquids. Dated May 24, 1883.
- Sulphate of Lime.**—No. 2566.—J. H. Johnson.—A communication from P. G. Journet, of Paris. Improvements in the manufacture of sulphate of lime or plaster of Paris. Dated May 22, 1883.
- Sulphite of Lime, &c.**—No. 2502.—R. Powell, of Liverpool. Improvements in the manufacture of sulphite of lime and of other earthy or alkaline bases. Dated May 19, 1883.
- Sulphurous Acid.**—No. 2621.—E. A. Bridges.—A communication from E. Hünisch and Dr. M. Schröder, of Rosditz, Germany. An improved process for extracting sulphurous acid from the fumes of furnaces, ovens, and such. Dated May 26, 1883.
- Surgical and Medical Dressings, &c.**—No. 2736.—S. Gamgee, of Broad Street, Birmingham. Improvements in the manufacture of fabrics for surgical and medical dressings and the manufacture of surgical splints and supports. Dated June 1, 1883.
- Tannic Black.**—No. 2549.—W. G. Gard and T. H. Cobley, both of Dunstable, Bedfordshire. Improvements in the manufacture of tannic black, and its application for paints and other useful purposes. Dated May 22, 1883.
- Treating Galvanisers' Flux, &c.**—No. 2479.—H. Kenyon, of Althorpe, Cheshire, manufacturing chemist. Improvements in processes and apparatus for obtaining useful products in the treatment of galvanizers' flux and other matters. Dated May 17, 1883.
- Vegetable Oils.**—No. 2334.—C. F. Stollmeyer, of Trinidad. An improved process for the manufacture of vegetable oils. Dated May 8, 1883.

Specifications published during the month:—

Postage 1d. each extra.

1880.

926\*. R. L. Howard. Machinery for introducing, &c., aerated waters and other liquids into bottles. (Disclaimer and Memorandum of alteration.) 4d.

1883.

4024. J. Lippmann. Bottle-stoppers. 6d.  
 4323. H. Hymans. Vegetable parchment. 4d.  
 4425. A. E. Nicholl. Attaching screw stoppers to bottles. (Not proceeded with.) 2d.  
 4477. J. Glover. Manufacture of soap used in fulling, &c. 2d.  
 4487. J. Imray. Treatment of phosphorites for the manufacture of manures, &c. 4d.  
 4512. J. Mackenzie. Portable voltaic batteries. 4d.  
 4523. J. Schweitzer. Malted farinaceous food. 6d.  
 4529. W. R. Lake. Manufacture of paper pulp from marine plants, &c. 2d.  
 4565. A. Pullan. Bottles, &c. 10d.  
 4579. W. H. Beek. Ice-making machinery. 8d.  
 4581. G. F. Redfern. Removing ink-stains from the human skin. 2d.  
 4582. F. E. Tucker. Preparation of crude-earth wax for the manufacture of candles, &c. (Not proceeded with.) 2d.  
 4591. F. Foster. Machine for pasting and applying labels to bottles, &c. 6d.  
 4637. J. Hutebings. Obtaining extract or soluble portion from tanning materials, &c. 6d.  
 4623. E. T. Darke. Preparations of animal vaccine. 4d.  
 4635. N. Thompson. Stoppers for bottles, jars, &c. 6d.  
 4644. C. F. Claus. Purification of coal-gas and obtaining ammonia therefrom. 8d.  
 4658. A. J. Boulton. Purification of alcohol. 6d.  
 4659. J. Young. Treatment of sewage. 8d.  
 4670. E. and A. Wright. Composition for imparting a lustrous appearance to boots, shoes, harness, &c. 2d.  
 4761. C. P. Evans. Photography. (Not proceeded with.) 2d.  
 4768. W. Weldon. Regenerating sulphur from alkali waste. 2d.  
 4692. A. W. L. Reddie. Manufacture of bicarbonate of soda. 6d.  
 4703. P. Jensen. Refrigerators. 6d.  
 4709. A. J. Boulton. Concentrating sulphuric acid. (Not proceeded with.) 2d.  
 4733. W. H. Beek. Process for the integral extraction of the constituent principles of fatty bodies. 6d.  
 4751. W. R. Lake. Obtaining tanning material from the aspidole plant. (Not proceeded with.) 2d.  
 4758. J. and J. Addie. Obtaining ammonia from furnace gases. 6d.  
 4769. A. Neilson and A. C. Thomson. Treatment of carbonaceous minerals for oil, gas, ammonia, &c. 8d.  
 4770. C. Pieper. Apparatus for cooling and refrigerating liquids. 8d.  
 4908. A. Macdonell. Filling and corking or stoppering bottles. 6d.  
 5030. H. A. Bonneville. Manufacturing anhydrous alumina. 4d.  
 5505. S. P. Wilding. Manufacture of cocoa and chocolate. 4d.



## LIQUIDATIONS.

- CURRY, JESIAH, & LLOYD, JOHN, Bath Street, Bristol, under firm of Curry, Lloyd & Co., chemists and druggists' sundrymen; J. Lloyd, Bridgend, also chemist and druggist. May 31.
- DALE, THOMAS, Upperbridge, Holmfirth, patent-medicine vendor and druggists' sundryman. May 22.
- DODGSON, JOSEPH, Bradford Road, Batley, chemist and druggist. June 5.
- JONES, THOMAS, Edward Street, Fenton, par. Stoke-upon-Trent, chemical grinder. June 1.
- SNEATH, THOMAS DIXON, Newark-on-Trent and Tuxford, chemist and druggist. June 4.

## PARTNERSHIPS DISSOLVED.

- FLEEMING, WILLIAM, & SON, Queen Square, Wolverhampton, pharmaceutical chemists. April 25. (William Fleeming, sen., and William Fleeming, jun.) Debts by W. Fleeming, jun.
- FLOYD & HICKS, Bury St. Edmunds, chemists and druggists. May 31. (James Floyd and William Thomas Hicks.) Debts by Floyd.
- MORRIS, W., & SOX, Pontamman, par. Bettws, chemical manufacturers. Feb. 27. (William Morris and Alfred Arthur Vennor Morris.) Debts up to March 27 by A. A. V. Morris, and from last-mentioned date by A. A. V. Morris and S. Callard.
- MULLETT & ENSOM, Mincing Lane, drug merchants. May 23. (John Frederick Edward Mullett and Vernon Ensom.) Debts by Mullett.
- PARK & TUTTILL, Eglinton Street and Argyle Street, Glasgow, surgeons and chemists and druggists. April 11. (Robert Park, M.D., and John Tutbill.) Debts by Park.
- STEWART & ILLINGWORTH, North Dean, in Skircoat, par. Halifax, chemical manufacturers. May 17. (David Vincent Stewart and Thomas Illingworth.) Debts by Illingworth.
- TATE & SHARPE, College of Chemistry, Duke Street, Liverpool, analytical chemists. June 2. (George Tate and Granville Hawley Sharpe.) Debts by Tate.

## Exchange Column.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

**Deposit of Money.**—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We shall acknowledge receipt to both parties by post-cards, and shall only pay it away on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of 3l. or less, or 1s. if above that amount.

## Dental and Surgical.

- Eleven Tomes' forceps (nearly new), key punches, &c., in case; 37s. Gradidge, Chemist, Andover.
- Twelve dental forceps in fair condition, with leather case; offers wanted. T. C. Lindsey, Barnsley.

## Drugs and Chemicals.

- 10 lbs. pulv. aloes socot.; what offers? Harvey, Margate.

40 lbs. petroleum jelly, in 5-lb. tins or in hulk. Harvey, Margate.

14 lbs. pot. iodid, 5s. per lb.; 20 oz. morph. hydrochlor, 6s. per oz.; 15 oz. otto rose extra virgin, 38s. per oz. 40/11.

One hundredweight effervescing saline, 11d.; 1 cwt. oil male fern, 10-lb. tins, 7s. lb.; samples on application to B. G. L. & Co., 11 Edmund Place, Aldersgate Street, E.C.

Fine honey, 7d. lb.; otto rose, 16s. and 22s. oz.; Jamaica honey, 4d. lb.; finest ess. lemon, 7s. 6d. lb.; ess. bergamot, 9s. lb.; 6 bottles H.G. ol. peppermint, 12s. 9d. lb.; splendid genuine beeswax (good colour), 1s. 5½d. lb.; 2 tins castor oil, 4½d. lb.; glycerine, 1,260 (pure), 11½d. lb.; pulv. aloes barb. opt., 1s. 8d. lb.; 28 lbs. pulv. rhei opt., 3s. 6d. lb.; 6 small tins St. Vincent arrowroot, 8d. lb.; orange shellac (small parcel), 11d. lb.; gum acacia sorts, 7½d. lb.; gum acacia turc. opt., picked large, 1s. 8d. lb.; small parcel gum tragacanth (white), 2s. 8d. lb.; best saffron, 4s. 6d. oz.; gum Benjamin (good), 2s. 3d. lb.; oil citronella, 2½d. per oz.; fine black cochineal, 2s. lb.; fol. senna, tin (fine), 4d. and 6d. lb.; camomile flowers (small lot), samples sent; Bismarck brown, 2s. 9d. lb. S. B. Hicks, Chemist, 5 Shaftesbury Terrace, Hornsey Rise, London, N.

## Proprietary Articles.

- Patents, &c., for disposal; list on application. 39/32.
- Gerolstein and Rosbach water, in good condition; what offers for a few dozen each? 91/19.
- Two hundredweight Rockitt's starch, 1-lb. boxes, clean, 30s. cwt. or exchange. Kemp, Horn-castle.

## COMPANIES—RESOLUTIONS TO WIND-UP VOLUNTARILY.

- BUNTON MINERAL WATER COMPANY (LIMITED). May 23. Liq.—R. H. Johnson, 282 Stockport Road, Levenshulme.
- KOPP'S EXTRACT OF MEAT AND COMPRESSED FOOD COMPANY (LIMITED). May 18. Liqs.—John Geary and Frederick Bigg.
- NEWCASTLE CHEMICAL WORKS COMPANY (LIMITED). May 29. Liq.—W. Allhusen, one of the managing directors of the company, Newcastle.

## ABSTRACTS OF SPECIFICATIONS.

FOR permission to print the following we are indebted to the courtesy of the *Engineer*:—

4785. **TREATING LINSEED FOR OBTAINING FLOUR.**—G. G. B. Casero, France.—*Octob r 7, 1882.*—(Complete.) 2d.

This relates to the production of tablets suitable for the toilet, for medical applications, and for finishing or dressing woven fabrics from linseed by reducing the same to powder, and eliminating the oil by means of liquids which dissolve it, and which are afterwards expelled by distillation. The powder is spread out in thin layers, and subjected to a current of dry air. The powder may be pressed into moulds.

3086. **Printing or Stamping Ink.** F. Wirth, Frankfurt.—June 30, 1882.—(A communication from G. Schmidt, near Frankfurt.) 2d.

This relates to the manufacture of inks by the admixture of peroxide or other black or dark oxide of manganese with linseed oil, varnish, or other vehicle.

3531. **Amber Varnish.** W. Morgan-Brown, London.—July 31, 1882.—(A communication from B. Borcsusky, Germany) 6d.

The invention consists substantially in highly diluting the molten amber for the purpose of allowing the impurities to settle in a comparatively short time; the separation may be done as well by filtering, and afterwards the diluting material—turpentine—is removed by a distilling process, the very heavy turpentine vapour being carried away by a strong draught of air.

4191. **Hair restorer.** E. Edmonds, London, September 2, 1882.—(A communication from J. Braithwaite, Paris.)—(Not proceed-d with.) 2d.

One hundred parts of metallic bismuth are dissolved in about 300 parts of azotic acid, and 75 parts of tartaric acid (dissolved in water) are added thereto. The mixture is then filtered and the acid washed away. The magma is then dissolved in a sufficient quantity of liquid ammonia, adding 75 parts of hyposulphite of soda with 2 parts of glycerine and 1 of tincture of caustic potash.

Twenty cases quarts Apollinaris water, 18s. per case; 1,600 1 lb. tins Peek, Frean's biscuits, assorted. Day & Co., Herve Hill.

Six gross Borwick's baking powder; six 6s. Simpson's antidote, 45s. lot, or exchange patents; offers. Cole, Heckington, Lincolnshire.

Virginian gum, 7½d., 6s.; 1s. 1½d., 10s. 6d.—20 per cent. Thurlow's pills, 7½d., 5s.; 1s. 1½d., 8s. 6d.—net. Hair restorer, 2s. 15s. doz., net. W. R. Fowler, Boston, Lincs.

## Optical.

Assortment of spectacles (Lemalle's), invoice price 3l. 16s.; cash offers wanted; bargain. Oliver, West Malling.

Great Bargain.—Complete stock of spectacles, at little over half cost-price. Address, Lancaster, 2 Osanburgh Street, London, N.W.

## Apparatus.

D'Or's electric light, No. 2, what offers, cash or books. Bottomley, Stock's Hill, Leeds.

Eight oil-cisterns, of best metal, each holds 160 gallons, has two taps and measures 18 inches high by 31 inches across; 50s. each. Leonard & Co., Nelson Street, Bristol.

Chemical balance, by Oertling, in glass case on mahogany box, with adjusting screws, agate planes, beam divided, sliding weight, carry each pan 1,000 grains, turns to 1-200th grain, in perfect condition; calcic chloride glass desiccator, burette, copper water-oven for moisture, determinations, &c., with thermometer, combustion tubing, &c.; platinum spatula, crucible, and wire. Apply to Coley, Chemist, Stroud, Gloucestershire.



Tincture-press, Maw's No. 20,  $\frac{1}{2}$  gallon; 6s. Fuller, Chemist, Norwich.

### Educational.

- First-class "Challenge" microscope, by Swift, equal to new, cost 15*l.*; will take 8*l.* 10s. Newbury, Chemist, Bournemouth.
- What offers for Statham's students' chemical chest? cost 3*l.* 3s., good condition, nearly new. Dell, Chemist, Leigh, Lancashire.
- The indigenous official plants and plants frequently mistaken for them, mounted side by side; 7s. 6*d.* Higginson, Newferry, Birkenhead.
- Set of illegible autograph prescriptions (original), 2s. 6*d.*, as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of successful students at last Minor, 1s. 1*d.*; lot of cheap, almost new, books. Stamp for list, Saunders, 130 Camden Road, N.W.; note change of residence.

### Literature.

- The Chemist and Druggist*, first nine years, from 1859, nearly complete; what offers? 15/15.
- United States "Dispensatory," fifteenth edition (36s.), quite new, for 20s. 35/35.
- Six unsold "Year-books of Pharmacy," from 1873 to 1878 inclusive; offers. Kingzett, 1 Church Street, Oswestry.
- Redwood's Pereira's "Materia Medica" (abridged), good and cheap. H. W. D., care of Mr. Fry, St. John's Hill, Sevenoaks.
- Pharmaceutical Journals*, from 1877-82 inclusive, almost complete; what offers? Thomas White, Church Street, Launceston, Cornwall.
- Squire's "Companion," 3s. 6*d.*; Barber's "Companion," 1s.; Ruddock's "Homoeopathic Vade Mecum," 1s.; Brasley's "Receipts," 2s.; all in good condition. Snel, Keighley.
- Smith's "Pharmaceutical Guide," 2s. 3*d.*
- Jndd's "Ointments, Tinctures, Syrups, and Weights," 1s. 9*d.*; *Pharmaceutical Journal*, 1881 and 1882; Statham's 10s. 6*d.* cabinet, 5s. 6*d.* G. W. H., 14 Coldharbour Lane, Camberwell.
- Offer wanted for *Pharmaceutical Journal* from commencement, in good condition, 1841 to 1873, 32 vols., and two vols. indexes, all half-bound in calf, also two succeeding volumes unbound. R. Bramwell, Windsor Street, Liverpool.
- Pharmaceutical Journal*, from 1841 to 1852, bound in half-calf; from 1863 to present date the following are missing: April 12, 1879; April 23, October 8 and 22, 1881; October 19 and Nov. 16, 1878; April 28, 1877; February 24 and June 20, 1874. Also, *Pharmacopie Française*, 1866; *Homoeopathic Pharmacopoeia*, 2*l.*; "Homoeopathic Guide," by Lanrie; what offers? W. R. Fowler, Boston, Lines.

### Soda-water Plant.

- Soda-water machine by Mondolot, Paris, second hand, 15*l.*; as good as new. At N. G. Wilcocks', Bath.
- Second-hand soda-water plant—several in stock. Address, Bratby & Hinchliffe, Sandford Street, Ancoats, Manchester.
- Barnett & Foster have some second-hand soda-water machinery of their own for sale. Apply, 23*r* Forston Street, Shepherdess Walk, London, N.
- 50*l.*, all at.—Second hand engine, boiler, lead generator, copper gasholder, Bramah pump, big condenser, gauges, filling machine for corks, ditto patents; seen at work by appointment. Particulars, N. G. Wilcocks, Bath.

American-principle machine, second-hand, by Davenport; 300 dozen daily; 20*l.* Particulars, N. G. Wilcocks, Bath.

Soda-water machine (Barnett's chemists and druggists'), cost 35*l.*, price 22*l.*; in good order, easily worked in small space; suitable for anyone commencing; also one gross Vallit's splits, cheap. 40/36.

### Shop Fittings.

- Hahnemann bust, 30 inches high; 7s. 6*d.* Fuller, Chemist, Norwich.
- 5-gallon carboy, cut stopper, mahogany stand, 9s. Roberts, Dentist, Kidderminster.
- Mahogany shop-desk, 8s.; Goddard's patent measure and funnels,  $\frac{1}{2}$ -gallon size, new, 2s. 6*d.* Floyd, Bury St. Edmunds.
- Counter-scales, as fig. 5 Maw's, for 19s. 6*d.*, cost 30s.; four mahogany carboy-stands, 20s. Hernc, 1 Spring Street, Hyde Park.
- A great bargain, the complete fittings of a chemist's shop; must be cleared out at once. Norman, Stapleford, Notts.
- Four 12 gallon pear-shape carboys, cut stoppers, with mahogany stands on rollers, as good as new, less than half cost price, together or separately, great bargain. Jeffery, Chemist, Bristol.
- Twenty-six narrow-mouthed blue shop-rounds, 16 oz., 8s. 6*d.*; 86 narrow-mouthed blue flat stoppered, 4 oz., 21s.; 20 wide-mouthed blue rounds, gilt-top corks, 4 oz., 6s. Fuller, Chemist, Norwich.
- Long counter, with four glazed partitions for front; window-fittings, figured glass; large bent-glass counter-case; small wall-case; paint-mild. J. W. Adams, 74 Oxford Street, Salford.
- Eighteen four-quart black store-bottles, as Maw's fig. 89, labelled, and caps, 6*d.* each; Leath & Ross' homoeopathic case, 3*l.* 3s. size, 4s.; pill machine, to cut twelve pills, new, 2s. 6*d.* J. W. Feltwell, 91 Hammersmith Road.
- Offer wanted for extraordinarily handsome window enclosure, 10 feet long, looking-glass inside, finest Spanish mahogany outside, nearly new, cost a lot of money; must be sold at once to clear. Deacon, Beckenham, Kent.
- 10½ dozen 20-oz. chemists' patent recess labelled bottles; also 1 doz. each 4 lb. and 20 oz. ointment jars, counter and dispensary scales, mortars, and various other articles. Address, J. Drummond, care of W. Shields, Chemist, Downpatrick.
- Nests drawers, show-bottles, specie-jars, glazed cases, shop bottles and jars, store bottles, lamps and irons, counters, various other articles, all cheap, to clear out; also about 20*l.* worth of various drugs, in small quantities of each; stamp for list. Lowe, 846 Old Kent Road, London.
- First class second-hand dispensing-counter, deal panelled counter-front and mahogany top, and mahogany screens with handsome plate-glass tablets, gold writing, 7 ft. 5 in. long by 4 ft. 11 in. high, 5*l.* 10s.; two 6-foot nests, two 4-foot, two 2 foot mahogany-fronted drawers. To be sold cheap. 22 Gun Street, Brushfield Street, Bishops-gate.
- An 11-ft. mahogany wall case, 4 ft. 6 in. high; a 5 ft. 6 in. ditto, ditto, made on the air-tight principle, 6 ft. 6 in. high; a ditto, ditto, 6 ft. 6 in. long, 6 ft. 6 in. high; 5 feet high by 6 ft. high ditto, ditto; 5 ft. by 3 ft. 8 in. high; 3 ft. 10 in. long by 4 ft. high; 10 ft. long, 2 ft. 3 in. high; 11 ft. by 6 ft. high; a 17-ft run mahogany wall case, with mahogany cupboards under; a 5-ft. ditto, ditto, both 9 ft. high; 7 ft. 6 in. long by 2 ft. 3 in. high; 4 ft. long, 3 ft. high; also a number of small upright cases, from 20 in. long, 2 ft. long, 3 ft. long, &c. E. Natali, 207 Old Street, E.C.

16-ft. run mahogany-fronted fixtures, drawers with lockers under, mahogany top to drawers, two silvered plate-glass cupboards between shelves and cornice over; a 12-ft. do. do. fixture, as Maw's fig. A 84; 2-ft. long, 4-ft. long, 6-ft. long, 8-ft. long, 10-ft. long, 12-ft. long mahogany-fronted drawers, glass knobs and glass labels (bevelled-edge), with lockers for bottles under; 4-ft. high, s. per foot run, inclusive of mahogany top to drawers. E. Natali, 207 Old Street, near Pitfield Street, London.

20 ft., 18-ft., 14-ft., 8-ft., 7-ft., 6-ft., 5-ft. mahogany-top counters fitted with drawers; 12-ft. mahogany-fronted counter; 6-ft. mahogany-fronted counter; two 10-ft. side-counters, fitted with drawers and cupboards, suitable for store-room; 14-ft. mahogany and plate-glass fronted counter; 7-ft. do. do.; 7-ft. 6 in. long, 3-ft. 6 in. high, mahogany and glass cupboard; a 6 ft. long, 3 ft. wide side-counter, fitted with drawers; a quantity of shelving, cupboard-doors, &c., suitable for fitting store-rooms, a bargain. E. Natali, 207 Old Street, near Pitfield Street, London, E.C.

Dispensing screens, 5 ft., 6 ft., 7 ft., glass case at each side, with silvered glass centre, with marble slab in front, silvered plate-glass centre, with carved wood on top, 3 ft. high, the cases at each side plate-glass doors, with tablets on top, inside case fitted with silvered glass and shifting shelves, 8*l.* 10s.; as fig. A 53, 5 ft. 6 in. long, 8 ft. long, 7 ft. 6 in. long; as fig. A 54, 4 ft. long; as fig. A 55, 5 ft. long, 6 ft. long, 7 ft. 6 in. long; sponge-cases, A 41, 65s.; A 43, 5*l.*; a centre-case, 8 ft. long, 5 ft. wide, mahogany, 10*l.* worth double; a number of other size screens and cases, very cheap. E. Natali, 207 Old Street, near Pitfield Street, London, E.C.

Plate glass counter-cases, as fig. A 2, 3 ft. long, 4 ft. long, 4 ft. 6 in. long; as fig. A 3, 3 ft. long, 40s.; 3 ft. 6 in. long, 45s.; as fig. A 6, 4 ft. long, 5 ft. long, 6 ft. long; as fig. A 7, 3 ft. 6 in. long, 6 ft. long; as fig. A 8, 5 ft. long, 6 ft. long; as fig. A 13, 4 ft. long, 4 ft. 6 in. long; fig. A 15, 6 ft. 6 in., 7 ft., 8 ft., and 9 ft. long; A 16, 3 ft., 3 ft. 6 in., 4 ft. long; A 17, 4 ft. and 4 ft. 6 in. long; A 18, 5 ft., 6 ft., 7*l.*; 7 ft. 6 in., 8*l.*; 9 ft., 10*l.*; toothbrush-cases, A 9, 35s.; A 10, revolving front, 50s.; desk and cases, fig. A 30, 2 ft. 6 in. long and 3 ft. long; A 31, 65s.; cigar-cases, A 34; bottles, jars, specie-jars, carboys, &c., bargains. E. Natali, 207 Old Street, near Pitfield Street, London, E.C.

Good second-hand fixtures.—Spanish mahogany counter, 12 ft. long, fitted with drawers all the way underneath, 10*l.* 10s.; a handsome dispensing-counter, with screen on top, fitted with drawers and every convenience, 10*l.*; mahogany desk and case, same as Maw's as fig. A 31, plate-glass door, mirror backs, shifting shelves, and velvet tray, 3*l.*; mahogany sponge case, same as fig. A 41, plate glass all round, plate-glass tablet with gold writing, 3*l.* 2s.; flat plate-glass case, 5 ft. 6 in. long, 2 ft. wide, 12 in. deep, with velvet trays, plate glass mirror falls, same as fig. A 49, on a Spanish mahogany table with four legs, same as fig. A 50, 5*l.*; mahogany dispensing-screen, 6 ft. long, with cases at each side, plate-glass doors, mirror backs, shifting shelves and velvet trays to cases, marble slab, and plate-glass mirror in centre, with tablets and carved wood on top, fitted with three long shelves at the back, 7*l.* 10s.; 6 ft. mahogany dispensing screen, plate-glass doors, mirror backs, shifting shelves and velvet trays, inside case, plate-glass tablet with gold writing on top, same as fig. A 55, a great bargain, 7*l.* 5s. J. Pygrave, 12 Curzon Street, Wenlock Street, Hoxton, London, N.

Dispensing-screen, very handsome, marble slab in centre, and cases each side, 6 ft. long, 4L 10s.; another screen, 6 ft. long, 8L; screen, 8 ft. long, 10L 10s.; screen, marble slab, 5 ft. long, 4L 5s.; screen, 4 ft. long, marble slab, 4L; screen, 5 ft. long, marble slab, 5L 15s.; a druggist's shop now standing in Birmingham, ready fitted, about 15 ft. long counters, counter drawers, and general fittings; desk, glass case and dispensing-screen, 48L; a lot of surgical instruments from a surgeon retiring (a large quantity) to be sold separately; desk and case, 48s. (made by Treble); a large lot of specie jars, globes, and ointment jars, clearing out. R. Tomlinson, St. Paul's Square, Birmingham.

Second-hand stock.—Mahogany counter-case, circular plate-glass trays, with upright ease, plate-glass shelf, reflectors, as Maw's A 4, 42 in. long, 25 in. wide, 23 in. high, no carving, 6L; nest 49 mahogany-fronted drug-drawers, deal lockers, and coverboard, 94 in. long, 48½ in. high, 3L 15s.; two elegant mahogany carboy-pillars, carved caps, fluted columns, 49½ in. high, 16 in. bases, 7L; Spanish mahogany dispensing screen, three pilasters, and trusses, plate-glass sashes and tablets, own make, 107 in. long, 23½ in. high, 7L 10s.; mahogany external doors, plate-glass shutters and fanlight, 88½ in. high, 48 in. wide, 3L; mahogany shop-front sash for four squares, 139 in. long, 111½ in. high, 30s.; 21 1-gallon ditto, 10s. 6d.; 26 3-pint rounds, 26s.; 6 quart syrups, 6s. W. Hawke & Son, Wild Court, Great Wild Street, London.

### Formulae.

For 5s., really genuine formula for a delicious sauce like "Yorkshire relish," Worcestershire sauce, &c. 38/20.

The addition of an ingredient to lavender water, made from foreign oil—the process adopted by a leading London manufacturer—renders the product equal to that manipulated with finest Mitcham oil; full information and working formula for half-crown postal order. "Devoniensis," Manor House, Broad-hempston, Totnes.

Fragrant foaming dentifrice (like "Floriline"); marking ink, *sine* silver (aniline), writing executed defies chemicals; effervescent fruit salino (resembles Eno's); magic neuralgic drops (never-failing remedy); quinine and iron tonic (resembles Pepper's); lime-juice and glycerine (inseparable, white as milk); blue-black ink (non-corrosive, *sine* iron or galls); cherry tooth paste (never ferments, like Gosnell's); brilliantine (inseparable, like Rimmel's); pill-coating, (pearly white, no mucilage or mastic used); glycerine jelly (perfectly transparent); crimson marking-ink; hair-restorer (colourless, no deposit, *sine* silver); aromatic vinegar; toilet vinegar (as Rimmel's); plate-powder (like Stevens' "Silicon"); Oleum Flavum Conc., for pomades (colour stable); soluble essence ginger (like Hay's); corn solvent, clear (not acid); liquor copaibae comp. c. buchu et matieo (mixes clear with water); gonorrhoea paste, excellent (Dr. Ricord's); taraxacum and podophyllin (resembles Pepper's); with many others; send stamp for list, stating wants. The toilet preparations are identical with those prepared by a wholesale West-end firm; others equally good; all inexpensive to make; 6s. each (five for 1L). Readers are cautioned against cheap and worthless imitations. I was first to advertise formulae in this journal. Note change of residence, "Analyst," care of Mr. Warnes, 130 Camden Road, N.W.

Gonorrhoea in all its stages and complications, successful treatment, 2s. 6d.; also, primary, secondary, and tertiary syphilis, 2s. 6d.; menthol cones, relieve toothache, tic, neuralgia, and sciatica instantly; Parrish's chemical food, syrup hypophosphites (equal to Fellow's), 1s. 6d. each. Address, "Surgeon," Hebburn-on-Tyne.

Valuable Recipes.—Chlorodyne, corn-eradicator, Eau-de-Cologne, fragrant lavender, marking-ink, cherry and areca nut tooth-pastes, sachets; children's cooling, worm, and hooping-cough powders; brilliantine, neuralgic mixture, hair-restorer, bronchial lozenges, shaving-cream, pepsine wine, peccoral cough-syrup, quinine tonic (as Pepper's), essence rennet, consumption specific, horse-blister, Leeming's essence, woundstone, sauce; 1s. each; six, 5s. 40/34.

Formulae of successful preparations, each guaranteed to be thoroughly reliable:—"Foaming Liquid Dentifrice," pleasant and effectual; "Quinine and Iron Tonic," agreeable, permanent, and does not affect the teeth; "Glycerine Jelly," equal to Wheeler's, without gelatine, isinglass, starch, or soap; "Hair-restorer," rapid in action and harmless, has "paid the rent" where now sold; "Grape-juice Saline," entirely soluble, preferred to Eno's, and can be sold at half the price; "Marking Ink," very successful, equal to Bond's and harmless to the fabric. Price 9d. each; three, 2s.; six, 3s. 6d.; post free. W. Stewart, 39 French Street, Southampton.

Profitable and Reliable Specialties.—"Distemper Pills" for dogs, a certain remedy used in large kennels in Leicestershire; "Cattle Food," aromatic condiment, like Thorley's; "Cattle Oils," for internal or external use, highly approved; "Alterative Powders" for pigs, improve appetite, increase weight, and keep in health; "Tonic Pills" for poultry, ensure 50 per cent. more eggs; "Red Paste" for roup, and all diseases in game, fowls, &c.; "Glycerine Jelly," transparent, exquisitely perfumed, three colours; "Toilet Vinegar," delightfully refreshing, half usual price; "Currie Powder," the receipt of an Indian cook; "Chutney," excellent aromatic combination, half price of pickles, more digestive and piquant; "Florida Water," highly-approved toilet requisite; "Bay Rum," quite equal to American-made, without distillation; "Freckle Lotion," removes freckles in a few days, also sunburn, and allays irritation from gnat-stings, &c.; "Moth Powder," certain destruction, and prevents attacks; "Salt of Celery," a perfect substitute for root, cheaply produced; "Flavoured Browning," indispensable culinary adjunct, delicious flavour; "Tic Specific" (surgeon's pet recipe), cures nine cases out of ten, an elegant mixture; "Diarrhoea Mixture," great improvement on "Board Trade Mixture," more presentable and efficacious; "Worm Syrup," pleasant taking and certain in action; "Pile Powders and Ointment," never-failing remedies; "Sal Puugens Olorif," best ever introduced, retains pungency so long as salt remains; "Anti-Cholera Drops," safe, simple, certain preventive of diarrhoea; "Blood Cleanser," resembles a much-advertised preparation; "Itch Ointment," improved form of old-fashioned unguent, good disinfectant; "Nursery Pomade," answers double purpose, certain to give satisfaction. Recipes 1s. 1d. each, six for 5s., with full directions, post free. Send for detailed lists. Terms, "satisfaction guaranteed;" note my advertisements in this journal since January, 1880. T. Brooks, Chemist, Louth, Lincs.

Speed drinks for calves, best ever known; alternative condition powder for horses' swelled legs, greasy heels, also gentle physic, makes coat smooth and glossy, gives appetite, cleanses and purifies the blood, and gradually invigorates the whole body; chilblain liniment, electric cure; gonorrhoea emulsion, not disagreeable; 1s. each; inseparable lime cream and glycerine, specially recommended, 5s. "Chemicus," Mr. Caunt, Skegley Forest, Mansfield.

### Miscellaneous.

Duplicate of diamond earrings, pledged for 15L; price 3L, or exchange in patents. 39/16.

Several ewt. 4-lb. and 7-lb. brown paper bags, lined white, new, cash offers requested, part or lot. F. Craven, Pontefract.

Cans.—Small number, good, sound, clean, and cheap. Particulars from "H., 70 Monier Road, Old Ford.

Gentleman's light summer macintosh, best quality, new, will accept 12s. 6d. Address 331 Lodge Road, Birmingham.

Advertiser, declining the fancy trade, has a saleable lot of silver-gilt and other smelling bottles, fans, ivory-back hair brushes, for disposal, cheap. Address, 91/19.

100 full-size sack bags, once used, only 9d. each; 300 strong bushel bags, once used, 2s. dozen, or exchange for castor-oil tins. Kemp, Horncastle.

Maw's dispensing-scales, fig. 7, brass, 12s., plated, 16s., in working order; pill machine, twelve, 3s. 6d.; 2 lbs. ext. lupuli, 10s. Padwick, Redhill.

Cash offers wanted for 36 1s. hair-brushes, glass backs; 36 1s. 6d. hair-brushes, glass backs; 24 bottles Champion's vinegar; one barrel Young's No. 1 paraffin oil at per gallon. Wellington, Freshwater, I.W.

### WANTED.

Chemist and Druggist Diary, 1883. 287 Crystal Palace Road, S.E.

New or second-hand cases, &c., as advertised for in April. Cole, Heckington, Lincolnshire.

Six oil-cisterns, with taps, to hold about 4 gallons. A Cooper's sheep-dipping apparatus, complete. Warwickshire (40/40).

Latest edition Hooker's "Student's British Flora;" state price. Tom Kittow, Chemist, Church Street, Llanccannan.

Samuel Moore & Co.'s bronchial cigarettes; state quantity and price. Macfarlane, Chemist, Wishaw, Lanarkshire.

Chemist and Druggist posted ten days' old. Jefferson, Chemist, 52 Robertson Street, Hastings.

Upright black store-bottles, with caps, Maw's fig. 89, to hold 8 pints; state price and number to J. W. Feltwell, Hammersmith Road, W.

Wanted, immediately, a good second-hand still of about 30 gallons, complete; also an evaporating-pan of about 10 gallons. Address, with particulars, "Chemist," 27 Warwick Street, Regent Street, W.

### ADDRESSES AND INFORMATION WANTED.

W. P. Owen, originally a doctor in Margate, 38/26.

5s. will be given for the correct address of Mr. C. Langford, chemist, late of Downham Market. Kemp, Horncastle.

Present address of Mr. T. A. Telfer, late Assistant-master at Dunbeved College, Llanccannan, now living in London. 4/26d.

Any chemist receiving a prescription to dispense for Captain or Mrs. Acland, stamped "Earnshaw, Victoria Place, Eastbourne," is particularly requested to communicate with Mr. E., at Eastbourne, without delay.



## Trade Reports.

THE Board of Trade statistics for May show a slight increase in the imports and a moderate decrease in the exports. Generally the figures indicate a steady, but not a developing, business. The total imports and exports compare as follows:—

	May, 1882	May, 1883
Imports .. .. .	£35,935,954	£36,257,443
Exports .. .. .	£20,047,066	£19,490,565

Chemicals show as under:—

	May, 1882	May, 1883
Alkali.. .. .	cwt. 660,790	667,595
Ditto .. .. .	value £195,793	£198,975
Other chemicals .. .. .	£201,654	£191,113

MINCING LANE, June 12, 1883.

Since our last issue the markets generally have shown great heaviness, and, whatever inducements were offered, the trade evinced no disposition to buy more than sufficient for actual requirements. Business has also been affected by the Whitsun holidays and Derby week intervening, leaving comparatively but few days available for public auctions, which have been necessarily heavy on several occasions; in one day ninety-six public sales were advertised—the largest number ever known in Mincing Lane, and representing an aggregate value of 1,000,000*l.* sterling. The two drug sales, which we report further on, were unusually depressed, only a small proportion of the goods offered being sold; but after the last sale a better demand set in, many of the bought-in lots finding buyers. Nearly all East Indian and China produce is exceptionally low, but a great improvement is anticipated in the autumn. The spring trade was very good, causing a general inflation of values. This was due in a great measure to expectation of large orders from America on the strength of a more favourable tariff, and the removal of the super duty of 10 per cent. on produce indirectly imported into the States, which had already taken place in January. The advance in quotations which then occurred has in many cases been lost, but fortunately leaving no serious consequences, as buyers have been very cautious, and speculators find no encouragement, as formerly, to overtrade their capital. The chemical markets have been dull, and business in drysaltory produce has been curtailed, with lower prices for shellac, cochineal, &c. Gambier is, however, the exception, spot sales being made as high as 30*s.* per cwt. With continued fine weather, giving hopes of a plentiful harvest, we look forward to an improvement in the home trade, and a more encouraging outlook for general trade.

The first series of public sales since our last was held on May 17, consisting of fourteen catalogues. Following so close on the holidays, considerable heaviness prevailed, and only a small proportion of the goods offered were sold, viz.:—

**ALOES.**—Cape, being very scarce, realised higher rates; good hard, 56*s.* 6*d.*; 35*s.* to 42*s.* for common. East India socotrine sold at 6*l.* 2*s.* 6*d.*; Barbadoes and Curaçoa, 6*l.* 5*s.* for fine, 82*s.* 6*d.* for good.

**AMBERGRIS.**—8 tins sold at 61*s.* to 70*s.* per oz.

**BARK.**—Only a few lots sold; *Calisaya* at 2*s.* 7*d.*; *Carthagena*, 8*s.* to 1*s.* 1*d.*; crown and grey, medium quality, 8*d.* to 1*s.* 2*d.* per lb.

**CARDAMOMS** show no alteration in values.

**CAMOMILES** still sell at declining rates; 20 bales brownish at 20*s.* 6*d.* per cwt.

**COD-LIVER OIL.**—Nothing sold; good quality held firm.

**COLOMBO ROOT.** lower; 100 bales sold at 25*s.* to 27*s.*; 8 bales *Gentian*, 20*s.*

**LIQUORICE**, 12*s.* 6*d.* per cwt.

**ERCOT OF RYE.**—15 bags Odessa sold at 7*d.* per lb.

**ESSENTIAL OIL.**—*Aniseed*.—Buyers at 7*s.* 6*d.*; 9 cases *Geranium* sold at 2½*d.*, and *Croton* at 3½*d.* per oz.

**GALLS.**—Turkey, a few lots sold: Blues, 51*s.*; greens, 41*s.*; sorts, 37*s.* 6*d.* per cwt.

**GUM ARABIC.**—Turkey sorts sold at 53*s.* to 55*s.*; Australian, 24*s.* per cwt.

**ASSAFETIDA** met with good competition and sold at full rates: Good, 72*s.* 6*d.* to 80*s.*; blocky and sandy, 55*s.* to 70*s.* per cwt.

**BENJAMIN** sold as follows:—Siam, 37*l.* per cwt.; Sumatra, seconds, 7*l.* 5*s.*; low fourths, 30*s.* to 37*s.* per cwt.

**GAMBOGE.**—Lower; 20 cases sold: 16*l.* for good, and 12*l.* 10*s.* to 14*l.* 10*s.* per cwt. for coarse blocky.

**GUINEA GRAINS.**—50*s.* per cwt.

**HONEY.**—Jamaica, up to 41*s.* for fair quality; other descriptions, 37*s.* to 45*s.* per cwt.

**JALAP.**—20 bales Vera Cruz at 8*d.* to 1*s.* per lb.

**MUSK.**—Tonquin sold at lower prices: Pile 2, from 41*s.* 6*d.* to 47*s.* 6*d.*; Pile 3, 20*s.* 6*d.* to 21*s.* 6*d.* per oz.

**SENNA.**—Tinnevely, about 30 bales sold: 3*d.* for small leaf; 6¾*d.* for bold leaf.

**SOY.**—China remains dull at 1*s.* 7*d.* per gallon.

The second series of drug sales, on May 31, was also dull in the extreme, very few lots being sold in the room, but more inquiry prevailed later on, many of the bought-in lots being sold.

**ALOES.**—Cape were again dearer, good and fine qualities 58*s.* to 59*s.* 6*d.*, 26 cases sold. Bombay.—Socotrine, 90*s.* to 120*s.* 75 cases passing the hammer; privately there is a good demand at full rates.

**CUTTLE-FISH.**—7 cases sold at 3½*d.* per lb.

**CAMOMILE FLOWERS** are again lower: there is every prospect of a large crop; brown qualities sold at 18*s.* to 20*s.* per cwt., a decline of 4*l.* per cwt. since last year.

**CARDAMOMS** remain in a strong position; fine bold pale Malabar, 7*s.* to 7*s.* 3*d.*; dark, 4*s.* 11*d.* to 5*s.* 3*d.*; 2 cases seeds, 6*s.* 3*d.* per lb.

**OILS.**—*Castor* remains firm at 3¾*d.* for good seconds with a fair business passing. *Cod-liver* is steady; Newfoundland, 10*s.*; Norwegian, 14*s.* per gallon. There is a fair inquiry also for Japan oil, with sales at 7*d.* per lb., or 5*s.* 3*d.* per gallon in cases, and 6*s.* per gallon in casks, re-packed here.

**ESSENTIAL OILS** are steady, but very little business doing. *Aniseed*, Star, 7*s.* 7*d.* *Cajaputa*, 5 cases, 3*s.* 3*d.* per bottle. *Cassia* firmer; fine genuine, 4*s.* 4*d.*; 'doubtful', 3*s.* 10*d.* per lb.; 2 cases *Cinnamon*, 1*s.* 1*d.* *Croton*, 2*d.* per oz.; *Citronelle*, 1½*d.* per oz.; 15 cases *Grass Oil*, 1¼*d.* per oz. Rangoon *Wood Oils* meet with less inquiry, 30 cases bought in at 6*d.*, buyers at 5*d.* Fisher's *Patchouli*, 1*s.* 4*d.* per oz. *Geranium*, 2*d.* per oz.; 41 cases H. G. Hotchkiss' *Oil Peppermint* were taken out 12*s.* 6*d.* per lb., at 12*s.* sales could be effected. The English Mitcham crop promises to be large this year, but no estimate can yet be formed of the outturn.

**GUMS.**—*Arabic* 2*s.* lower; 200 packages East India bought in 34*s.* to 45*s.*; 14 packages Australian sold at 20*s.* to 22*s.* 26 bales Talca at 24*s.* 6*d.*; 100 bales Turkey sorts at 52*s.* per cwt. The market is slow, with great difficulty to make sales, unless at a reduction.

**AMMONIACUM** was lower, fine quality selling at 66*s.*; dark and yellow, 49*s.* to 61*s.* per cwt.

**BENJAMIN.**—Sold full up, with good competition: Siam, at 40*l.* 10*s.*; Sumatra, low seconds, 75*s.*; thirds, 65*s.* to 70*s.* per cwt.

ACROIDES being plentiful, only small sales can be effected at low rates.

GAMBOGE.—Fine quality, 17*l*. : 4 cases, low quality, which has the appearance of being adulterated with gum, sold up to 12*l*. 15*s*. per cwt.

MYRRH meets with good competition. 20 barrels Bombay sold up to 6*l*. 10*s*.; 10 bales Aden, 87*s*. 6*d*.; Zanzibar, 67*s*. 6*d*. to 80*s*. per cwt.

HONEY—30 barrels Jamaica, 33*s*. to 36*s*.

IPECACUANHA.—20 serons Rio at 3*s*. 4*d*. to 3*s*. 8*d*. per lb. for good sound parcels.

JALAP.—Dull; there is every indication of good supplies coming forward.

PAREIRA BRAVA.—2 bales, 5*l* per cwt.

RHU'BARB—100 chests were printed, of which 80 cases sold at full rates for fine qualities; Shensi root up to 3*s*. 7*d*.; trimmed Canton, 1*s*. 10*d*. to 2*s*. 1*d*. per lb.

ROOTS.—4 bales *Sencha*, at 2*s*. 2*d*. per lb.; 3 bales *Pellitory*, 45*s*.; 100 bales *Galangal*, 27*s*. per cwt.; good Venetian *Orris*, 48*s*. 6*d*. per cwt.

SARSAPARILLA.—30 bales Jamaica, at 1*s*. 9*d*. per lb. for sound; 20 serons Honduras, up to 1*s*. 4*d*. per lb.

SQUILLS—60 bags Malta sold at 3½*d*. to 4½*d*. per lb.

SOY.—China remains dull, with small sales at 1*s*. 7*d*. per gallon.

VANILLOES.—110 tirs Mauritius sold at 9*s*. to 25*s*. 6*d*. per lb.

WAX.—40 barrels Jamaica, 5*l*. 10*s*. to 6*l*. 17*s*. 6*d*.; Mogadore : 6 barrels, at 110*s*.

CARNAUBA remains very scarce and dear.

CAMPHOR.—No sales of importance have been made; there are sellers of China at 66*s*. reweight, with buyers at 65*s*., and Japan 68*s*. per cwt.

TAMARINDS.—New West India are rather firmer, with buyers at 16*s*. 6*d*. to 17*s*. 6*d*. per cwt.

#### ANOTHER REPORT.

MINCING LANE, June 12.

We are unable to report any general improvement in trade this month, quinine being about the only article which has shown any animation, and indeed the outlook, taken together with the remarkable falling off in the exports during the first five months of the year, is not cheering. There is, moreover, a general want of confidence, causing an utter lack of speculation in our markets.

The last drug sales passed off with an exceedingly calm tone. One tolerably large catalogue was gone through without a single lot being sold, every article offered being bought in; and later on we noticed one gentleman, who thought himself still amongst the sennas, shouting out repeatedly a bid of "twopence," whilst the venerable auctioneer was trying his best to sell East India aloes at 5*l*. 17*s*. 6*d*., so little interest was taken in what was going on. The sales advertised for the 14th inst. are also very heavy, and we fear will not be much more interesting, containing, as they do, large quantities of overstocked articles.

ACIDS.—Although a trifle firmer, during the recent very hot weather acids have not improved in price, but on the contrary are a little easier. *Tartaric* of foreign make is obtainable at 1*s*. 7½*d*.; English, 1*s*. 8½*d*. per lb.

*Citric*, although a considerable quantity has been sold during the last three weeks, is also a little lower, and may be readily bought at 1*s*. 8½*d*. per lb.

ALOES.—Cape of good quality are worth more money, and made as much as 59*s*. 6*d*. per cwt. in last sales.

ALUM may be called in fair demand for home trade, at 6*l*. per ton for lump, and 6*l*. 10*s*. ground, in bags.

ANTIMONY.—This article seems to have reached a very settled position at 22*l*. 10*d*. per ton. At this price it is as easy to buy 5 cwt. as it is to buy 5 tons. Bids for quantity at a little under price have been refused.

*Antimony Regulus*, best makes, 42*l*. per ton.

ARSENIC, steady at 10*s*. 9*d*. per cwt. landed.

BALSAMS in but small demand and easier; *Capiri* at 2*s*. 2*d*. to 2*s*. 4*d*. per lb.; *Peru*, 11*s*. 6*d*. to 11*s*. 9*d*.; and *Tolu* at 2*s*. 1*d*. to 2*s*. 2*d*. per lb.

BARK, in last sales, went flatly, and very large quantities of low sorts were offered. Since then, however, a good business has been done privately in the better qualities for quinine purposes. Notwithstanding this, we fully expect to see the usual large quantities offered in next sales.

BLEACHING POWDER is steady at 6*l*. 15*s*. per ton, with an average trade doing.

BORAX is without change, at 59*s*. per cwt. net, to 63*s*., less 2½ per cent. for best.

CALUMBA ROOT shows no signs of improvement, and may be bought at all prices from 20*s*. to 45*s*. per cwt., but there seems to be an utter absence of demand for the article.

CAMOMILE FLOWERS are in more demand for America and the Continent, but prices remain low, at 60*s*. to 80*s*. for fine white, and about 20*s*. to 50*s*. per cwt. for brown to medium qualities.

CAMPHOR.—Japan raw is now obtainable at 70*s*. per cwt. for best. In refined camphor there has been more business: English bells, 1*s*. 1*d*. per lb.; finest French makes, 1*s*. per lb.

CARDAMOMS, although, perhaps, not in strong demand, maintain values very steadily, finest Malabar sorts being still worth 7*s*. 6*d*. to 8*s*. 6*d*. per lb.

CHIRETTA.—This extraordinary article has again reached the level from whence it started on its great rise to 3*s*. per lb., and was sold in last public sales at 3½*d*. per lb. There is a very large stock here.

CLOVES.—Continual important arrivals are very largely increasing stocks here, which now amount in all to nearly 12,000 packages; prices are consequently easier, and fair bright quality Zanzibar are obtainable at 7*d*. per lb. Since the last spice sale a somewhat firmer tone is observable. The fall in price has been considerable during the last three months; in fact, hundreds of bales sold at 9½*d*. are just now becoming due, slowing a loss during the period of 2½*d*. per lb.

COCHINEAL has lost animation, and remains in a very quiet position at 11*d*. to 1*s*. 3*d*. per lb., according to quality.

COD-LIVER OIL is without change at from 10*s*. to 16*s*. per gallon asked. The extremely high prices are causing a large admixture of inferior oils to be made, and the greatest care is now necessary in buying the article.

CREAM OF TARTAR is very quiet, but steady at 129*s*. to 130*s*. per cwt.

CUBEBS.—We mentioned in our last report that an effort was being made to run this article, which has not, however, succeeded up to the present in raising the price, which for fair quality is to-day 9*l*. 10*s*. to 10*l*. per cwt.

ERGOT OF RYE.—Russian was sold in last public sales as low as 6½*d*. per lb., but good Spanish is still worth 1*s*.

ESSENCE OF LEMON continues to meet with a remarkably small demand. There is a large quantity offering at all prices from 4*s*. 6*d*. to 6*s*. 6*d*. per lb.

GALLS.—Large stocks, with prices lower; white, 40*s*.; green, 42*s*. 6*d*. to 45*s*.; and blue, 55*s*. to 57*s*. 6*d*. per cwt.

GENTIAN ROOT continues steady at 35*s*. per cwt. for good dry; finest powder at 40*s*.



**GLYCERINE.**—There is not much doing, but best quality commands 90s. per cwt. We hear that a very fine new make is shortly to appear on the London market.

**IODINE** continues very steady, at 4*d.* per oz. for Peruvian; 5*d.* to 5½*d.* Scotch.

**IPÉCACUANHA**, through lack of arrivals, enjoys a very steady position, and the mostly inferior sorts now being offered sell readily at 3*s.* 3*d.* to 3*s.* 9*d.* per lb., and good sound quality, if obtainable, is worth 4*s.* 6*d.* per lb. at least.

**ISINGLASS.**—Very little private business has taken place, and in last sales on May 29 the whole quantity of East India offered consisted of 195 cases Penang, 248 Bombay, and 45 cases Saigon, of which about 220 cases in all were sold. *Penang*.—120 packages sold. Leaf, small fine pale, 4*s.* to 4*s.* 3*d.*; good, 3*s.* 10*d.*; dark bold, 3*s.* 7*d.*; inferior and pickings, 1*s.* 7*d.* to 2*s.* 11*d.* Purse, ordinary to middling, 11*d.* to 1*s.* 1*d.*; good ordinary, 8*d.* to 9½*d.*; low to ordinary, 4½*d.* to 6*d.* Tongue, good to fine pale, 3*s.* 9*d.* to 4*s.* 2*d.*; good medium, 3*s.* 5*d.*; dark middling and ordinary, 2*s.* 9*d.*; dark ordinary, 2*s.* 3*d.* to 2*s.* 6*d.*; yellow to good pale, long sorts, 3*s.* 8*d.* to 4*s.* *Bombay*.—90 sold. Bladder, pipe, good to fine, 3*s.* 6*d.* to 3*s.* 8*d.*; good, 3*s.* 3*d.* to 3*s.* 6*d.*; very small, 1*s.* 10*d.*; pipe, good reddish, 2*s.* 9*d.*; dark pickings, 1*s.* 4*d.*; old tongue, good and fine pale, 3*s.* to 3*s.* 2*d.*; good middling pale, 2*s.* 9*d.* to 3*s.*; papery sorts to dark and very mixed, 8*d.* to 1*s.* 6*d.* Leaf, good pale and reddish, 3*s.*; middling and good, 2*s.* 9*d.* Purse, ordinary to good middling, 8*d.* to 9½*d.*; low to fair ordinary, 4½*d.* to 7*d.* *Saigon*.—17 packages sold. Leaf, good pale, long, 4*s.* 5*d.*; good pale, but small, 3*s.* 8*d.* to 3*s.* 10*d.*; reddish circular-leaf, 3*s.* 8*d.* Tongue, bold middling pale, 3*s.* 8*d.*; dark ordinary, 2*s.* 11*d.* per lb. The next public sales are fixed for the 26th inst.

**JALAP** continues only in moderate demand, at 8*d.* to 11*d.* per lb.

**LEMON JUICE** is worth 21*l.* 5*s.* per pipe f.o.b. Messina for prompt shipment, 21*l.* 15*s.* for July. Stocks are stated to be very small at Messina, although we do not hear so much about what may be lying elsewhere.

**MORPHIA SALTS** are lower, at 5*s.* 9*d.* to 6*s.* per oz.

**OPIUM** without any change, stocks remaining very great, and prices varying from 11*s.* to 18*s.* per lb.

**OILS.**—*Anised*, steady, at 7*s.* 9*d.* per lb.; *Citronelle*, quiet, 1½*d.* per oz.; *Lemon Grass*, flat, 1½*d.* per oz. American *Peppermint* is in better demand, after having been weakened by a public attempt to sell 41 cases of H. G.; this brought price down to 11*s.* 6*d.* to 11*s.* 9*d.* per lb. for this mark, but it has since recovered, and now stands firm at 12*s.* per lb. There being only a few cases of L.B. Hotchkiss left in London, 13*s.* is demanded for it; Hale & Parshall's, 12*s.* per lb.

**OTTO OF ROSES.**—We are now able to obtain some reliable information as to the outlook of this article, and by advices from our friends in Constantinople and at Kysanlik we are in a position to state that at present everything looks remarkably well, with a prolific show of buds. The weather also, up to the present, has been very favourable, and should it continue so up to the time of gathering, a very good crop may be reasonably expected. At the same time it must be borne in mind that very little indeed of the old crop exists, and there will be less still before the new comes into the market. Under these circumstances, and allowing that all goes well meanwhile, we do not expect to see a very great reduction on present prices, which, as they have been gradually reached, will probably be only gradually reduced. Otto of roses, although a crop article, is not a perishable one, and is as good after five years' keeping as when first distilled. Present prices remain unchanged. "Hmsen's" at 42*s.*, other qualities and brands ranging from 15*s.* to 38*s.* per Turkish oz.

**PIMENTO.**—Stocks are again larger, being now nearly 40,000 bags; consequently pimento, notwithstanding the best endeavours of its well-wishers, is very flat, at about 3¼*d.* per lb. for fair quality.

**POTASH, Chlorate**, continues in a remarkably dull position, and at the nominal quotation of 5¼*d.* per lb. entirely fails to attract attention. *Bichromate* steady at 5*d.* per lb.; *Sulpho-carbonate*, 25*s.* to 27*s.* 6*d.* per cwt., packed in petroleum casks free.

**POTASSIUM IODIDE**, quiet; English at 5*s.* 6*d.* per lb. Roque's French make, 5*s.* 5*d.*, packages free.

**QUASSIA WOOD** is still to be had in almost any quantity at about 3*l.* per ton, stocks being still very large.

**QUICKSILVER** remains in a very poor state, at 5*l.* 8*s.* 6*d.* per bottle.

**QUININE.**—After a long period of depression, this article has shown more animation during the last few days. Foreign makes in tin at the end of last week ruled at 5*s.* 9*d.* to 6*s.* per oz., at which price some fairly large sales took place. Better prices have since been made, and to-day 7*s.* per oz. was paid, but we have heard of no large business at the higher figures. Up to the time of writing this report, however, we find Messrs. Howard's price to be unaltered, at 7*s.* 6*d.* per oz. vials, whilst Pelletiers is quoted 7*s.* 5*d.* per oz. The rise in the foreign makes may be attributed to a demand from America (where good quinine barks have become temporarily scarce) arriving at a time when the usual Continental summer demand, increased somewhat above the average by the unusually hot weather, had to be satisfied. There is something peculiar about this rise, occurring, as it does, so soon after the recent public auctions, and the more so when we consider that the whole of the American parcel was, we believe, shipped to Europe immediately after the sale took place. Under all circumstances, much interest must necessarily attach to the bark sales taking place next Tuesday.

**RHUBARB** continues in a very good position, and out of 98 cases offered in last public sales 57 cases found buyers at full prices, ranging from 9*d.* to 3*s.* 7*d.* per lb., according to quality.

**SALTPETRE.**—Refined extremely quiet, at 24*s.* to 25*s.* per cwt.

**SAFFRON.**—Valencia sorts, 42*s.* to 47*s.* per lb. Alicante, 25*s.* to 30*s.*, with very little doing. There is a large quantity of low-priced sorts on the market, but not much of the pure kinds.

**SALICINE** continues steady, at 7*s.* 6*d.* per lb.

**SANTONINE**, unaltered, at 12*s.* 6*d.* per lb., with moderate business.

**SODA.**—Crystals, in consequence of continued demand, have advanced in price to 3*l.* 8*s.* 9*d.* per ton ex ship. *Bicarbonate* is not so active, but price remains unchanged at 7*l.* 15*s.* to 8*l.* per ton landed. *Caustic* remains steady at 9*l.* per ton cream, and 9*l.* 5*s.* per ton for white, 60 to 62 per cent.

**SULPHUR** in more demand, at 10*s.* 6*d.* to 12*s.* per cwt. for flowers, and 9*s.* to 10*s.* per cwt. for roll, ex warehouse.

**CHEMICALS** are dull, with prices in most cases ruling in buyers' favour. *Acid Tartaric*.—Best English, 1*s.* 8½*d.*; foreign, 1*s.* 7½*d.* The supply of *Argols* is still very small, and lower prices are not probable. *Oxalic* is slow of sale at 6*d.*, less 7½ per cent. *Citric* steadier, with fair sales at 1*s.* 8½*d.* per lb.

*Cream of Tartar* is firm and scarce, with business passing at 128*s.* to 130*s.* per cwt.

*Chlorate of Potash*.—Very slow at 5½*d.*

*Bichromate*.—5*d.*, less 3 per cent.

*Sulphate Quinine*.—All the secondhand parcels having been cleared off the market, and with a fair demand from America, more steadiness prevails. Howard's firm at 7*s.* 6*d.*, with ready buyers at 7*s.* 4*d.*; Pelletier's, 7*s.* 3*d.* A good business has been effected in German and Italian at 6*s.*; makers now hold for 6*s.* 6*d.* per oz.

*Bleaching Powder* is in fair demand at 6*s.* 9*d.* to 7*s.* ex warehouse; and Tyne, 5*s.* 10½*d.* per cwt.

*Soda Crystals* are also in more demand, and rather higher, viz., 68s. 9d., and Tyne 59s. 6d., 2½ discount. *1sh.*—Tyne, 1¼d., less 11, for 52; and 48, 1¼d., less 8½, and 1¼d. net, 52 per cent.

In Drysaltery and Dye Goods business has been restricted.

COCHINEAL shows a total absence of demand, due in some measure to the high price of argols; this circumstance also affects the sale of *Lac Dye*, which remains dull for good qualities, while low native sorts are unsaleable.

SAFFLOWER.—The trade in this article, which formerly was very important, is now so much curtailed, owing to the aniline competition, that the sales made are not sufficiently important to report.

SHELLAC is again lower; orange, which was selling in 1880 at 10l. 15s. per cwt., is now offering at 75s. to 80s.; dark button, selling at 8l. to 9l., now offering at 58s. to 70s., and this notwithstanding the deliveries from warehouse, and the consumption on the Continent and America, being larger than ever known in previous years. We may fairly expect a good advance soon, as it is a favourite article with speculators, and at present low prices is well worth attention. Fine DC is held for 7l. per cwt., the stock being very small. Very fine ruby garnet is offering at 69s., and fine pale button 90s. per cwt.

TURMERIC.—Bengal is gradually hardening in value 2,000 bags selling at 17s. 6d. to 18s. per cwt.

INDIGO.—The public sales are to be held on July 9.

GAMBIER.—Large sales have been made, closing at 30s. spot, and 28s. per cwt. for arrival. About 1,200 tons sold.

SPICES.—*White Pepper*.—In consequence of large sales "without reserve," the market closes flat and lower. Singapore, fair to good, 9½d. to 9¾d.; Penang, 8d. to 8¼d. 300 bags "London-made," 9½d. to 10d., being a reduction of ½d. per lb. 14 cases very fine Tellicherry sold at 2s.; good, 1s. 6d. per lb.

*Black Pepper* is also easier, Penang selling in small parcels at 5½d.; Trang, 5½d.; Lampong, 5½d.; Malabar, 6¾d. per lb. For arrival about 200 tons sold.

CHILLIES.—Good Zanzibar sold dearer in auction, up to 36s. *Capsicums* are very depressed, with sellers at 13s. to 20s. per cwt.

PIMENTO is lower; a fair quantity changed hands, closing at 3¼d. to 3¾d. per lb.

CASSIA LIGNEA very dull. The supplies being large there are sellers at 34s. 6d. per cwt.

NUTMEGS.—With a fair demand from America prices remain steady. The imports are not large, and present moderate quotations are likely to remain so.

CLOVES are again lower, showing a decline of quite 2d. per lb. Good Zanzibar, 7d.; Amboyna, 10½d.; and Penang, 1s. 9d. per lb.

ARROWROOT.—The supplies of St. Vincent have been large, with little inquiry. About 1,000 barrels sold at 3½d. to 4¼d. Bermuda is very scarce and dear.

TAPIOCA is now so extensively cultivated in the Straits that supplies will probably far exceed the consumption for some years to come. About 5,000 bags flake have been sold, good fair Singapore at 1¾d. to 1½d.; fine white, 1¾d. to 2d. per lb.; fine Penang, 2¼d. per lb. Rio comes forward in very small parcels: 50 barrels good quality sold at 4¾d. Pearl is also dull: 3,000 bags sold, large seed, 14s.; medium ditto, 14s. 6d.; bullets, 15s. to 16s. per cwt.

SALTPETRE.—More business doing at lower prices. About 8,000 bags spot sold, Bengal, 7½ to 12½ per cent. refraction, at 18s.; 5 to 6 lbs., 18s. 9d. to 19s.; for arrival, 200 tons near and distant, at 19s. Refined steady but little doing, at 24s. to 25s. per cwt.

QUICKSILVER remains dull. First-hand quotation, 110s.; second-hand parcels freely offering at 1s. to 1s. 6d. per bottle less.

TURPENTINE is steady, with sales on spot at 31s.; Sept.-Dec. delivery, 28s. 3d. per cwt.

PETROLEUM OIL.—The demand being necessarily limited for the summer months, very little business is reported. Spot, 6½d. to 6¾d.; Sept.-Dec. delivery, 6¾d. for gallon.

GERMAN SPIRIT.—Posen is quoted, 67 to 69 overproof, immediate delivery, 1s. 4½d. per proof gallon, ex quay London, with fair business passing.

PETROLEUM.—The following is from the circular of Messrs. W. H. Samuel & Co., Liverpool, dated June 11, 1883:—

"For the first time since October, 1878, the production of crude petroleum for the month of April was less than the deliveries to the refiners, and now a check has at last been put upon the constantly-increasing stocks, the stock at the end of April being almost 100,000 barrels less than at the end of March. For many years past the trade has been constantly told that the boundaries of the petroleum fields were clearly defined, and that production would soon fall below consumption, but notwithstanding this, new producing districts have as frequently been discovered, and production has continued to be in excess of consumption without even temporary exception, for nearly five years, and it is, therefore, not surprising that latterly many interested in the trade have almost ceased to give any credence to these often-repeated prophecies. It would seem, however, that we have at length reached a turning point, and the result is already seen in the advance of crude oil from 92c. per barrel on May 1 to 120c. on June 1. The effect upon the Liverpool and London markets has been to slightly advance prices, but as the advance in price of refined oil in America has not been in proportion to the advance in crude, the advance here has been limited to only ¼d. to ½d. per gallon. It is not expected that any substantial advance will take place in the price of refined oil in the home markets during the next few weeks, the consumption and the amount of business passing in the summer months being so limited; but the period of higher prices has now been brought within a measurable distance, and if production continues to decrease, or even remains as it is now, a higher range of prices during next season may be fairly anticipated.

*The following is a statement of the Stocks of certain Drugs in the Port of London on May 31, 1883, and the same a year previously:—*

	1883	1882		1883	1882
Aloes .....cs	2,287	3,006	Gum ( <i>cont.</i> )—		
" .....kegs	6	3	Benjamin.. pkgs	2,477	2,139
" .....gourds	65	161	Damar.... "	4,566	2,947
Anised, Star chta	378	445	Galbanum "	19	24
Arrowroot ....cs	9,815	10,550	Gamboge.. "	154	152
" bxs & tins	5,665	6,284	Guaiaacum.. "	34	42
Balsam....cs, &c.	150	18	Kino .....	148	201
Bark, Medicinal			Kowrie .....tns	755	559
cks & cs	3,803	1,092	Mastic .....pkgs	108	105
srns, &c.	53,758	60,569	Myrrh, E.I.	246	209
Borax.....pkgs	966	1,105	Olibanum.. "	6,833	7,526
Bees' Wax ..bbs			Sandarach.. "	928	599
srns	606	480	Tragacanth pkgs	2,684	1,607
" cks & cs	601	925	Ipecac....cs & bgs	276	239
cakes	4	4	Jalap .....bbs	341	213
Wax, Jap.vgtbl.pk	2,479	4,311	Nux Vomica pkgs	770	1,461
Camphor ....pkgs	4,005	6,167			
Cardamoms ..chta	572	671	Oil—		
Cocc. Ind. bgs, &c.	466	645	Castor .....csks	502	751
Colombo root pkgs	1,994	2,141	" .....cs	6,254	12,342
Cream Tartar.cks	46	58	Palm .....tns	69	216
Cubebs .....bgs	154	95	Coconut...tns	5,974	11,690
Dragonsblood chta	119	180	Olive ..cks, &c.	1,313	1,575
Galls, China, &c.			Aniseed .....cs	122	59
bgs & cs	2,669	242	Cassia .....cs	243	370
Trky & Prsn sks	7,073	8,062	Opium ..chta, &c.	2,226	1,553
			Rhubarb....chta	561	936
Gum—			Sarsaparilla....bbs	738	763
Ammoniac pkgs	267	264	Senna ....bbs, &c.	1,833	2,561
Animi & Copal					
pkgs	12,545	8,142	Shellac—		
Arabic, Barbary			Orange..chta, &c.	20,976	16,960
pkgs	2,554	2,304	Garnet... "	10,437	11,115
Turkey .. "	3,441	2,363	Button.. "	7,320	5,721
E.I..... "	2,242	2,984	Turmeric ....tns	1,190	2,018
Assafoetida .. "	330	250	Vermilion ....chta	46	14



## Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

## CHEMICALS.

## ACIDS—

	Last Month		This Month	
	s. d.	s. d.	s. d.	s. d.
Acetic..... per lb.	0 2½	to 0 2½	0 2½	to 0 2½
pure.....	0 5	0 9	0 5	0 9
glacial.....	0 8	1 1	0 8	1 1
Benzoic Sublimate.....	0 0	0 3 6	0 0	0 3 6
Ex Gum. .. per oz.	0 0	0 0 6½	0 0	0 0 6½
Citric.....	1 8½	1 8½	1 8½	0 0
Gallic.....	3 2	3 6	3 2	3 6
Hydrochloric..... per cwt.	4 6	7 6	4 6	7 6
Nitric..... per lb.	0 3	0 3½	0 3	0 3½
Oxalic.....	0 6	0 0	0 6	0 0
Sulphuric.....	0 0½	0 1	0 0½	0 1
Salicylic.....	6 9	9 6	6 9	9 6
Tannic.....	1 4	2 6	1 4	2 9
Tartaric, English.....	1 8½	0 0	1 8½	0 0
foreign.....	1 7½	0 0	1 7½	0 0
ANTIMONY, crude..... per cwt.	22 0	0 0	22 0	0 0
star.....	40 0	0 0	40 0	0 0
ARSENIC, lump.....	24 6	0 0	24 6	0 0
powder.....	10 6	10 9	10 6	11 0
BRIMSTONE, rough.....	8 0	8 6	8 0	8 6
roll.....	8 9	10 0	8 9	11 0
flour.....	10 0	12 6	10 0	12 6
GLYCERINE, German.....	75 0	90 0	75 0	90 0
refined.....	40 0	45 0	40 0	45 0
crude brown.....	8 0	8 2	8 0	8 2
IODIFORM..... per lb.	0 4	0 0	0 4	0 0
IODINE, dry..... per oz.	0 6	0 0	0 6	0 0
resublimed.....	0 10	1 4	0 10	1 4
MAGNESIA, calcined..... per lb.	5 0	0 0	5 0	0 0
Hwds. ....	110 0	0 0	109 0	110 0
MERCURY..... per bott.	2 11	2 11½	2 11	2 11½
PRECIPITATE, red..... per lb.	2 10	0 0	2 10	0 0
white.....	1 8	2 0	1 8	2 0
PRUSSIAN BLUE.....	12 6	13 0	12 6	13 0
SANTONINE.....	19 0	0 0	10 0	0 0
SALICINE.....	21 6	0 0	21 6	0 0
THYMOL.....	120 0	0 0	120 0	0 0
SALTS—				
Alum..... per ton	120 0	0 0	120 0	0 0
powder.....	120 0	125 0	120 0	125 0
Ammonia:				
Carbonate..... per lb.	0 6½	0 0	0 6½	0 0
Hydrochlorate, crude,				
white..... per ton	600 0	760 0	600 0	760 0
Sulphate.....	360 0	380 0	340 0	350 0
Argol, Cape..... per cwt.	83 0	96 0	83 0	96 0
Red.....	70 0	85 0	70 0	91 0
Operto, red.....	38 0	42 0	34 0	42 0
Bleaching powder.....	7 0	0 0	7 0	0 0
Borax, British refined.....	59 0	63 0	59 0	63 0
Calomel..... per lb.	2 6	0 0	2 6	0 0
Chloral hydrate.....	4 5	4 7	4 5	4 7
Liebreich's.....	5 6	8 0	5 6	6 0
Copper:				
Sulphate..... per cwt.	20 6	21 0	20 6	21 0
Copperas, green..... per ton	55 0	0 0	55 0	0 0
Corrosive Sublimate..... per lb.	1 11	0 0	1 11	0 0
Cream Tartar, French..... per cwt.	130 0	0 0	128 0	132 0
brown.....	110 0	0 0	110 0	0 0
Epsom Salts.....	4 0	6 0	4 0	6 0
Glauber Salts.....	4 0	5 0	4 0	5 0
Magnesia: Carbonate.....	40 0	0 0	40 0	0 0
Pond, Hwds. ....	72 0	0 0	72 0	0 0
Morphie Murias.....	7 3	7 6	7 3	7 6
Phosphorus..... per lb.	2 3	2 4	2 3	2 4
Potash:				
Bichromate.....	0 6	0 0	0 5	0 0
Carbonate:				
Potasbes, Canada,				
1st sort..... per cwt.	29 0	0 0	29 0	0 0
Pearlasbes, Canada,				
1st sort.....	46 0	43 6	43 0	46 6
Chlorate..... per lb.	0 5½	0 0	0 5½	0 6½
Prussiate.....	0 10½	0 0	0 9½	0 1½
red.....	1 11	2 0	1 11	2 6
Sulphate..... per cwt.	10 6	11 6	10 6	11 6
Potassium:				
Bromide..... per lb.	1 6	0 0	1 6	0 0
Chloride..... per cwt.	9 0	0 0	9 0	0 0
Iodide..... per lb.	5 6	0 0	5 6	0 0
Quinine:				
Sulphate, British, in				
bottles..... per oz.	7 6	0 0	7 6	0 0
Sulphate, French.....	7 3	0 0	7 3	0 0
Sulphate, German.....	6 5	0 0	6 6	0 0
Sal Acetos..... per lb.	0 8½	0 0	0 8½	0 0
Sal Ammoniac, British per cwt.	44 0	45 0	44 0	0 0
Saltpetre:				
Bengal, 6 per cent.	19 6	0 0	18 9	19 0
or under.....				

## Saltetre:—(cont.)

	Last Month		This Month	
	s. d.	s. d.	s. d.	s. d.
Bengal, over 6 per	0 0	to 19 0	18 0	to 18 6
cent..... per cwt.	25 0	0 25 6	24 0	25 0
British, refined.....	8 0	0 0	7 9	0 0
Soda: Bicarbonate.....	45 0	0 0	45 0	0 0
Hwds. ....				
Carbonate:				
Soda Ash..... per deg.	0 1½	0 1½	0 1½	0 1½
Soda Crystals..... per cwt.	3 1½	0 0	3 4½	0 0
Caustic.....	9 3	0 0	8 9	9 3
Hyposulphite..... per cwt.	8 0	8 6	8 0	8 6
Nitrate.....	12 6	0 0	11 3	0 0
Zinc Sulphate.....	12 0	14 0	12 0	14 0
SUGAR OF LEAD, White.....	30 0	34 0	30 0	34 0
Brown.....	26 6	0 0	26 6	0 0
VERDIGRIS..... per lb.	0 8	1 0	0 8	1 0
VERMILION, English.....	2 3	0 0	2 3	0 0
China.....	2 5	0 0	2 4	0 0
DRUGS.				
ALOE, Hepatic..... per cwt.	80 0	140 0	80 0	140 0
Socotrine.....	60 0	190 0	60 0	190 0
Cape, good.....	50 0	55 0	50 0	59 6
Inferior.....	40 0	45 0	40 0	50 0
Barbadoes.....	60 0	150 0	60 0	150 0
Curacao.....	43 0	120 0	48 0	120 0
AMBERGRIS, grey..... per oz.	60 0	130 0	60 0	130 0
BALSAM—				
Canada..... per lb.	2 2	0 0	2 2	0 0
Capivi.....	2 4	2 5	2 4	2 5
Peru.....	11 9	0 0	11 9	0 0
Tolu.....	2 2	2 3	2 2	2 3
BARKS—				
Cassia alba..... per cwt.	25 0	27 6	25 0	27 6
Cascarilla.....	23 0	0 0	23 0	0 0
CINCHONA—				
Peru, gray..... per lb.	0 9	1 10	0 9	1 10
Calisaya, flat.....	1 3	2 0	1 3	2 0
quill.....	4 0	7 0	4 0	7 0
Carthagena.....	0 6	2 8	0 6	2 8
Columbian.....	0 8	4 0	0 8	4 0
Cuprea.....	0 6	1 10	0 6	1 10
New Granada.....	1 0	4 0	1 0	4 0
Pitayo & Maracaibo.....	0 6	1 10	0 6	1 10
Red.....	2 0	9 0	2 0	9 0
East India, crown.....	1 0	5 3	1 0	5 3
red.....	0 6	3 10	0 6	3 10
BUCHU LEAVES.....	0 2	1 4	0 2	1 0
CAMPHOR, China..... per cwt.	65 0	0 0	66 0	0 0
Japan.....	67 6	70 0	68 0	70 0
Refin. Eng..... per lb.	1 1	0 0	1 1	0 0
Tablets.....	1 2	0 0	1 2	0 0
CANTHARIDES, China.....	2 6	3 0	2 6	3 0
Russian.....	3 9	4 0	3 9	4 0
CAMOMILE FLOWERS..... per cwt.	40 0	120 0	20 0	80 0
CASTOREUM..... per lb.	22 0	32 0	22 0	32 0
CHIRETTA.....	0 4	0 5	0 4	0 5
DRAGON'S BLOOD, Ip..... per cwt.	70 0	240 0	70 0	240 0
ERGOT OF RYE..... per lb.	1 0	0 0	0 7	1 0
FRUITS AND SEEDS (see also Seeds and Spices)				
Anise, China Star..... per cwt.	95 0	100 0	95 0	100 0
Russian.....	20 0	30 0	20 0	30 0
Beans, Tonquin..... per lb.	3 0	5 0	3 0	5 0
Cardamoms, Malabar,				
good.....	5 0	7 0	5 0	7 0
inferior.....	4 0	4 6	4 0	4 6
Aleppy.....	4 0	5 0	4 0	5 0
Madras.....	2 0	4 0	2 0	4 0
Ceylon.....	2 0	2 10	2 0	2 10
Malabar sorts.....	4 0	7 0	4 0	7 0
Cocculus Indicus..... per cwt.	11 0	13 0	11 0	13 0
Colocynth, apple..... per lb.	0 10	1 3	0 10	1 3
Cubebs..... per cwt.	145 0	150 0	145 0	150 0
Cummin.....	30 0	34 0	30 0	34 0
Fennugreek.....	14 0	0 0	14 0	0 0
Juniper Berries.....	8 6	11 0	8 6	11 0
Nux Vomica.....	9 0	12 6	9 0	12 0
Tamarinds, E. India.....	8 0	12 0	8 0	12 0
West India.....	13 0	15 6	15 0	17 8
Vanilla, large..... per lb.	29 0	29 0	20 0	29 0
inferior.....	8 0	18 0	8 0	18 0
FLOWERS—Dalmatian.....	60 0	90 0	60 0	90 0
Caucasian.....	95 0	0 0	95 0	0 0
HONEY, Chili..... per cwt.	39 0	52 0	39 0	52 0
Jamaica.....	30 0	40 0	30 0	40 0
IPERACUANIA..... per lb.	3 0	4 6	3 0	4 6
ISINGLASS, Brazil.....	2 0	4 9	2 0	4 9
Tongue sort.....	2 0	5 3	2 0	5 3
East India.....	0 8	5 0	0 6	5 0
West India.....	2 6	4 5	2 6	4 5
Russ. 1st.....	7 0	10 3	7 0	10 3
Simovia.....	2 2	2 4	2 2	2 4
JALAP, good.....	0 10	1 0	0 10	0 11
infer. and stems.....	0 8½	0 9½	0 7	0 8
LEMON JUICE..... per deg.	0 0	0 0	0 0	0 0
LIME JUICE..... per gall.	1 6	0 0	1 6	0 0
LIGUORICE, Spanish..... per cwt.	55 0	100 0	55 0	100 0
Liquorice Root.....	20 0	25 0	12 0	20 0
MANNA, flaky..... per lb.	4 6	5 0	4 6	5 0
MUSK, Tonquin pod..... per oz.	65 0	96 0	65 0	96 0
Grain.....	49 0	70 0	49 0	70 0
Yunan pod.....	40 0	59 0	40 0	50 0
OILS (see also separate list)				
Almond, expressed..... per lb.	1 3	1 5	1 3	1 5
Castor, 1st pale.....	0 4½	0 0	0 4½	0 0
second.....	0 3½	0 0	0 3½	0 0
Cod-liver..... per gall.	6 0	12 0	6 0	12 0

	Last Month		This Month	
	£ s. d.	to £ s. d.	£ s. d.	to £ s. d.
<b>Essential Oils:</b>				
Almond ..... per lb.	30 0	to 0 0	30 0	to 0 0
Anise-seed, star ..	7 7	.. 7 8	7 7	.. 7 8
" German, &c. "	8 0	.. 14 0	8 0	.. 13 0
Bergamot .....	7 0	.. 10 0	7 0	.. 9 0
Cajepout ..... per bott.	3 3	.. 0 0	3 3	.. 0 0
Caraway ..... per lb.	5 6	.. 0 0	5 6	.. 0 0
Cassia ..... per oz.	3 10	.. 0 0	4 0	.. 4 4
Cinnamon ..... per oz.	1 9	.. 2 6	1 9	.. 2 6
Cinnamou-leaf ..	0 3	.. 0 0	0 2 3	.. 0 0
Citronelle .....	0 1 6	.. 0 0	0 1 6	.. 0 0
Clove ..... per lb.	5 3	.. 0 0	4 6	.. 5 0
Juniper ..... per lb.	1 6	.. 2 0	1 6	.. 2 0
Lavender, Exotic ..	6 9	.. 8 6	6 9	.. 8 6
" Mitcham ..	130 0	.. 0 0	130 0	.. 0 0
Lemon ..... per oz.	6 0	.. 8 0	6 0	.. 8 0
Lemongrass ..... per oz.	0 1 2	.. 0 0	0 1 6	.. 0 0
Neroli ..... per lb.	7 0	.. 0 0	7 0	.. 0 0
Nutmeg ..... per lb.	0 8	.. 0 0	0 8	.. 0 0
Orange ..... per lb.	12 0	.. 0 0	12 0	.. 0 0
Otto of Roses ..... per oz.	30 0	.. 38 0	30 0	.. 33 0
Patchouli ..... per lb.	1 4	.. 2 6	1 4	.. 2 0
<b>Peppermint:</b>				
American ..... per lb.	11 6	.. 12 6	12 0	.. 0 0
(H.G. Hotchkiss) ..	12 0	.. 0 0	12 0	.. 12 6
English ..... per lb.	35 0	.. 0 0	35 0	.. 0 0
German ..... per lb.	8 0	.. 15 0	8 0	.. 14 0
Japan ..... per lb.	7 0	.. 9 0	7 0	.. 9 0
(Cocking's) ..... per lb.	11 0	.. 0 0	10 9	.. 11 0
Rosemary ..... per lb.	2 6	.. 3 9	2 6	.. 3 9
Sassafras ..... per lb.	2 6	.. 0 0	2 6	.. 0 0
Spearmint ..... per lb.	12 0	.. 14 0	12 0	.. 14 0
Thyme ..... per lb.	2 6	.. 0 0	2 6	.. 0 0
Mace, expressed .. per oz.	0 2	.. 0 0	0 2	.. 0 0
OPIMUM, Turkey ..... per lb.	16 0	.. 19 0	16 0	.. 19 0
" inferior ..... per lb.	12 0	.. 15 0	12 0	.. 15 0
QUASSIA (bitter wood) per ton	60 0	.. 65 0	60 0	.. 65 0
RHURARB, China, good				
and fine ..... per lb.	2 9	.. 4 4	2 9	.. 4 4
Middling to fair ..	1 0	.. 2 6	1 0	.. 2 6
<b>ROOTS—Calumba ..... per cwt.</b>	42 0	.. 0 0	25 0	.. 35 0
China ..... per cwt.	29 0	.. 0 0	20 0	.. 0 0
Cns-Cus ..... per cwt.	20 0	.. 21 0	20 0	.. 21 0
Galangal ..... per cwt.	26 0	.. 23 0	23 0	.. 28 0
Gentian ..... per cwt.	21 0	.. 0 0	20 0	.. 21 0
Orris ..... per cwt.	43 0	.. 60 0	23 0	.. 50 0
Pellitory ..... per lb.	12 0	.. 60 0	42 0	.. 60 0
Pink ..... per lb.	1 6	.. 0 0	1 6	.. 0 0
Rhutany ..... per lb.	0 5	.. 0 6	0 5	.. 0 6
Snake ..... per lb.	2 5	.. 2 6	2 2	.. 2 3
Snake ..... per lb.	1 6	.. 0 0	1 6	.. 0 0
SAFFRON, Valencia ..	47 0	.. 50 0	47 0	.. 50 0
Alicante ..... per lb.	25 0	.. 30 0	25 0	.. 30 0
SARSAPARILLA, Lima ..	0 6	.. 1 0	0 6	.. 1 0
Guayaquil ..... per lb.	1 2	.. 1 5	1 2	.. 1 5
Honduras ..... per lb.	1 3	.. 1 5	1 3	.. 1 5
Jamaica ..... per lb.	1 3	.. 2 0	1 3	.. 2 0
SASSAFRAS ..... per cwt.	0 0	.. 0 0	0 0	.. 0 0
SCAMMONY, Virgin ..... per lb.	32 0	.. 35 0	32 0	.. 35 0
second and ordinary ..	15 0	.. 28 0	15 0	.. 28 0
SENA, Bombay ..... per lb.	0 2 1	.. 0 0	0 1 1	.. 0 0
Tinuvelly ..... per lb.	0 3	.. 1 2	0 3	.. 1 2
Alexandria ..... per lb.	0 3	.. 1 6	0 9	.. 1 6
SFERMACETI, refined ..	1 1	.. 3 0	1 3	.. 0 0
American ..... per lb.	0 1 1	.. 0 0	0 1 1	.. 0 0
SQUILLS ..... per lb.	0 1	.. 0 2	0 1	.. 0 2 1
<b>GUMS.</b>				
AMMONIAC, drop ..... per cwt.	3 0	.. 0 0	2 1 3	.. 3 6
ANIMI, fine washed ..	18 0	.. 20 0	18 0	.. 20 0
sorts ..... per lb.	8 0	.. 13 0	8 0	.. 13 0
ARABIC, pale picked ..	1 10	.. 2 0	1 10	.. 2 0
sorts, mid. to fine ..	1 5	.. 1 10	1 5	.. 1 10
TURKEY, pick. gd. to fin.	5 1 1	.. 7 0	6 10	.. 7 0
second & inferior ..	2 5	.. 2 10	2 5	.. 2 10
sorts ..... per lb.	2 0	.. 2 10	2 0	.. 2 15
ASSAFETIDA, cm. to fin.	0 15	.. 4 0	0 15	.. 4 0
BENJAMIN, Siam, 1st				
& 2nd ..... per lb.	16 0	.. 30 0	25 0	.. 42 0
Sumatra ..... per lb.	2 1 3	.. 12 0	2 10	.. 12 0
COPAL, Manilla ..... per lb.	25 0	.. 52 0	25 0	.. 52 0
Angola, red ..... per lb.	145 0	.. 152 6	145 0	.. 152 6
DANMAR, pale ..... per lb.	60 0	.. 85 0	60 0	.. 85 0
EUPHORBUM ..... per lb.	17 0	.. 20 0	17 0	.. 20 0
GALBANUM ..... per lb.	0 3	.. 0 10	0 3	.. 0 10
GAMBOGE, picked pipe ..	260 0	.. 320 0	260 0	.. 340 0
GUAIACUM ..... per lb.	0 9 1	.. 2 0	0 9 1	.. 2 0
KINO ..... per cwt.	45 0	.. 0 0	45 0	.. 0 0
KOWRIE, sorts ..... per lb.	65 0	.. 80 0	65 0	.. 80 0
selected ..... per lb.	90 0	.. 220 0	90 0	.. 220 0
MASTIC, picked ..... per lb.	2 9	.. 3 6	3 0	.. 3 6
MYRRH, good and fine ..	200 0	.. 230 0	200 0	.. 230 0
ordinary to fair ..... per lb.	80 0	.. 140 0	80 0	.. 140 0
OLIBANUM, p. drop ..... per lb.	43 0	.. 45 0	40 0	.. 45 0
amber & yellow ..	36 0	.. 0 0	36 0	.. 0 0
SENEGAL ..... per lb.	45 0	.. 0 0	40 0	.. 45 0
SANDARAC ..... per lb.	90 0	.. 110 0	90 0	.. 110 0
SHELLAC, Orange ..... per lb.	60 0	.. 140 0	80 0	.. 140 0
Liver ..... per lb.	82 0	.. 0 0	75 0	.. 80 0
THUS ..... per lb.	25 0	.. 0 0	25 0	.. 0 0
TRAGACANTH, leaf ..... per lb.	200 0	.. 209 0	200 0	.. 260 0
in sorts ..... per lb.	20 0	.. 180 0	20 0	.. 180 0

## OILS.

SEAL, pale ..... per tun £ s. £ s. £ s. £ s.

	Last Month		This Month	
	£ s. d.	to £ s. d.	£ s. d.	to £ s. d.
<b>Oils:—(cont.)</b>				
SEAL, yellow to tinged pertun	35 0	to 0 0	35 0	to 0 0
brown ..... per tun	33 0	.. 0 0	30 0	.. 31 0
SPERM ..... per tun	73 0	.. 0 0	73 0	.. 72 0
COD ..... per tun	36 0	.. 0 0	36 0	.. 0 0
WHALE, South Sea, pale	33 10	.. 0 0	34 0	.. 0 0
yellow ..... per tun	31 0	.. 0 0	30 0	.. 0 0
brown ..... per tun	30 0	.. 0 0	21 0	.. 30 0
Sardine ..... per tun	25 0	.. 0 0	25 0	.. 27 0
OLIVE, Seville ..... per tun	58 10	.. 39 0	38 10	.. 39 0
Gioja ..... per tun	36 0	.. 37 0	36 0	.. 37 0
Levant ..... per tun	36 0	.. 0 0	36 0	.. 0 0
Mogador ..... per tun	35 10	.. 35 0	35 10	.. 36 0
Spanish ..... per tun	35 0	.. 0 0	35 0	.. 0 0
Sicily ..... per tun	37 0	.. 0 0	37 0	.. 0 0
COCOANUT, Cochinchina ..	28 10	.. 0 0	38 10	.. 0 0
Ceylon ..... per tun	35 0	.. 0 0	34 0	.. 34 10
Mauritius ..... per tun	35 0	.. 0 0	35 0	.. 0 0
PALM, fine ..... per tun	44 10	.. 0 0	39 0	.. 40 0
LINSEED ..... per tun	29 10	.. 21 0	20 10	.. 20 15
RAPSEED, English, pale	37 10	.. 0 0	35 10	.. 0 0
brown ..... per tun	35 0	.. 0 0	35 0	.. 0 0
COTTONSEED ..... per tun	30 0	.. 0 0	30 0	.. 30 5
LARD ..... per tun	65 0	.. 0 0	63 0	.. 0 0
TALLOW ..... per tun	25 0	.. 47 0	25 0	.. 47 0
<i>s. d.</i> <i>s. d.</i> <i>s. d.</i> <i>s. d.</i>				
TURPENTINE, American per cwt.	34 6	.. 0 0	30 0	.. 31 0
PETROLEUM, refined .. per gall.	0 7	.. 0 0	0 6 1	.. 0 0
Spirit ..... per gall.	0 6 1	.. 0 0	0 6 1	.. 0 7
<b>SEEDS.</b>				
CANARY ..... per qr.	65 0	.. 80 0	60 0	.. 75 0
CARAWAY, English ..... per cwt.	0 0	.. 0 0	0 0	.. 0 0
German, &c. .... per cwt.	21 0	.. 26 0	23 0	.. 26 6
CORIANDE ..... per qr.	10 0	.. 21 0	10 0	.. 21 0
HEMP ..... per qr.	38 0	.. 0 0	38 0	.. 0 0
LINSEED, English ..... per qr.	0 0	.. 0 0	0 0	.. 0 0
Black Sea & Azof ..	42 6	.. 0 0	40 0	.. 0 0
Calcutta ..... per qr.	43 6	.. 0 0	40 6	.. 0 0
Bombay ..... per qr.	43 0	.. 0 0	40 6	.. 0 0
St. Petersburg ..	39 0	.. 41 0	35 0	.. 33 0
Mustard, brown ..... per bshl.	10 0	.. 15 0	10 0	.. 15 0
white ..... per bshl.	8 0	.. 14 0	8 0	.. 14 0
POPPY, East India ..... per qr.	43 0	.. 0 0	43 0	.. 0 0
<b>SPICES.</b>				
CASSIA LIGNEA ..... per cwt.	35 6	.. 0 0	34 6	.. 0 0
Vera ..... per cwt.	24 0	.. 28 0	24 0	.. 28 0
Buds ..... per cwt.	40 0	.. 41 0	40 0	.. 41 0
CINNAMON, Ceylon :				
1st quality ..... per lb.	1 0	.. 2 5	1 0	.. 2 6
2nd do. .... per lb.	0 8	.. 2 0	1 0	.. 2 3
3rd do. .... per lb.	0 9	.. 1 9	0 8	.. 1 6
Tellicherry ..... per lb.	0 0	.. 0 0	0 0	.. 0 0
Chips ..... per lb.	0 2 1	.. 0 5	0 2 1	.. 0 5
CLOVES, Penang ..... per lb.	1 7	.. 1 10	1 7	.. 1 10
Amboyna ..... per lb.	0 10	.. 1 1	0 10	.. 0 11
Zanzibar ..... per lb.	0 7 1	.. 0 0	0 7	.. 0 8
GINGER, Jam., fine ..... per cwt.	95 0	.. 190 0	80 0	.. 180 0
Ord. to good ..... per cwt.	48 0	.. 90 0	48 0	.. 90 0
African ..... per cwt.	39 0	.. 40 0	35 0	.. 0 0
Bengal ..... per cwt.	33 0	.. 0 0	38 0	.. 0 0
Malabar ..... per cwt.	0 0	.. 0 0	0 0	.. 0 0
Cochin ..... per cwt.	45 0	.. 112 0	40 0	.. 110 0
PEPPER, Black, Malabar per lb.	0 6 1	.. 0 0	0 6 1	.. 0 0
Singapore ..... per lb.	0 6 1	.. 0 0	0 6 1	.. 0 0
White ..... per lb.	0 9 1	.. 0 0	0 9 1	.. 0 9 1
Cayenne ..... per lb.	0 7	.. 1 3	0 7	.. 1 3
MACE, 1st quality ..... per lb.	1 7	.. 2 3	1 7	.. 2 3
2nd and inferior ..	1 4	.. 1 7	1 4	.. 1 7
NUTMEGS, 78 to 60 to lb.	2 10	.. 3 9	2 19	.. 3 9
90 80 ..... per lb.	2 9	.. 3 10	2 9	.. 2 10
132 95 ..... per lb.	2 0	.. 2 6	2 0	.. 2 6
PIMENTA ..... per lb.	0 3 1	.. 0 4	0 3 1	.. 0 3 1
<b>VARIOUS PRODUCTS.</b>				
COCHINEAL—				
Honduras, black .... per lb.	1 4	.. 1 6	1 4	.. 1 6
silver ..... per lb.	1 2	.. 1 5	1 2	.. 1 5
Mexican, black ..... per lb.	0 9	.. 1 0	0 9	.. 1 0
silver ..... per lb.	0 9	.. 1 0	0 9	.. 1 0
Teneriffe, black ..... per lb.	1 1	.. 1 5	1 1	.. 1 5
silver ..... per lb.	1 0	.. 1 2	1 0	.. 1 2
GALLS, Tky blue ..... per lb.	50 0	.. 60 0	50 0	.. 65 0
China ..... per lb.	62 0	.. 0 0	62 0	.. 0 0
INDIGO, Bengal ..... per lb.	4 0	.. 7 6	4 0	.. 7 6
Madras ..... per lb.	1 6	.. 6 9	1 6	.. 6 9
Kurrup ..... per lb.	2 0	.. 5 6	2 0	.. 5 6
Oude ..... per lb.	1 9	.. 5 6	1 9	.. 5 6
Guatemala ..... per lb.	3 0	.. 6 6	3 0	.. 6 6
ROSIN, American ..... per cwt.	5 6	.. 11 0	5 6	.. 11 0
SOAP, Castile ..... per cwt.	28 0	.. 0 0	28 0	.. 0 0
SOY, China ..... per gall.	1 7	.. 0 0	1 7	.. 0 0
WAX, BEES, English ..... per cwt.	6 2 6	.. 6 17 6	6 2 3	.. 6 17 3
Jamaica ..... per cwt.	5 1	.. 7 0	6 10	.. 7 10
East India ..... per cwt.	5 1	.. 7 0	6 10	.. 7 10
VEGETABLE, Japan ..... per lb.	1 7	.. 2 8	2 3	.. 2 6
Paraffin ..... per lb.	0 4	.. 0 6	0 4	.. 0 6
WOOD, DYE, Bar ..... per ton	13 10	.. 20 0	3 10	.. 0 0
Brazil ..... per ton	15 0	.. 40 0	25 0	.. 0 0
Cam ..... per ton	16 0	.. 30 0	16 0	.. 30 0
Fustic, Cuba ..... per ton	0 0	.. 8 7	0 0	.. 8 7
Jamaica ..... per ton	5 19	.. 5 12 3	5 10	.. 5 12 6
Logwood, Campeachy ..	8 0	.. 0 0	8 0	.. 0 0
Jamaica ..... per ton	5 19	.. 0 0	5 10	.. 0 0
LIMA, first pile ..... per ton	10 0	.. 0 0	10 0	.. 1 0
RED SANDARS ..... per ton	6 0	.. 0 0	6 0	.. 0 0





### Patent Medicines in Italy.

To The Chemist and Druggist—

SIR,—With reference to the letter from this office of the 5th ult., I am directed by Earl Graoville to acquaint you that his lordship has received a dispatch from Her Majesty's Ambassador at Rome, reporting that, in answer to representations addressed by him to the head of the Italian Commercial Department respecting the restrictions on the sale of patent medicines in Italy, that officer explained that the object of the Medical Board was to prevent the introduction into Italy of patent medicines containing drugs injurious to health, and that if it could be shown that the medicines for which admission was applied for were sanctioned in any properly authorised Pharmacopœia, there would probably be no difficulty as to their admission.

I am, sir, your most obedient, humble servant,  
Foreign Office, May 21, 1883. EDMOND FITZMAURICE.

### Coloured Insect Powder.

To The Chemist and Druggist—

SIR,—The following is a translation of Mr. Julius Stettner's reply to a paper written by Mr. W. L. Howie on "Insect Powder," and printed in the last number of THE CHEMIST AND DRUGGIST:—

"It would have been much more to the purpose, more reliable, and more explicit, if Mr. Howie had addressed his inquiry to me or to any respectable grinder of insect flowers, and he would, no doubt, have received every information and explanation of facts which are still a mystery to his mind.

"To treat the principal subject of objection, the so-called adulteration of insect powder with chrome yellow. A very simple reference to figures would convince the reporter that, because the chrome yellow is a much more expensive product than the insect powder, there cannot be the reason of cheapening, but the simple reason of producing uniformity of colour. The real fact of the matter is that various flowers give different shades of colour when pulverised; but as, especially, the retailer is most particular to have always one uniform shade of colour, it becomes necessary to take the highest natural shade and bring all lesser shades to the uniform standard. As far as I am concerned, and no doubt, any other grinder, I would rather not have anything to do with shades; but it is for the trade to decide and for makers to conform.

"It has been said that fustic or turmeric would not be so objectionable, but I distinctly wish it to be understood that these vegetable matters, of which, of course, a larger presence would be required, would act prejudicially to the efficiency of the powder, and would, therefore, in my opinion, be considered objectionable.

"Of chrome yellow the most minute trace goes a long way, and therefore the efficacy of the powder is not interfered with.

"It is my sincere wish that buyers should allow me to send the powder in its original condition; but then I must have no complaints respecting colour, as the colour of the flowers varies a good deal, and the powder must necessarily also vary. Colouring the insect powder is not only a great trouble, but also an expense which I am too anxious to save."

While we can only endorse all that Mr. Stettner writes respecting insect powder, we must explain that some years ago we ourselves sent samples of insect powder out to him, which had then been given to us as a specimen of desirable powder sold in this market, and more frequently our large buyers have reminded us that the great necessity was to supply a uniform shade of colour, baving to deal with a class of men who look upon the slightest deviation of colour with suspicion.

Mr. Julius Stettner is the oldest and, until recently, the only grinder of insect powder in Trieste, and it may therefore interest your readers to know what a practical man of long standing has to reply to the ambitious work of Mr. Howie.

Yours faithfully,  
A. & M. ZIMMERMANN.

**Glycerole of Lead**—What should be used when this is ordered in a prescription? Our correspondent says:—"There are two formulae published—one in the *Pharmaceutical Journal* of May 6, 1876, and the other in 'Squire's Companion'—of such different strengths that confusion must result, and I know of one case of injury caused by the stronger preparation being used undiluted." The original direction for making glycerole of subacetate of lead, as given by Mr. Balmauno Squire, consisted simply in "making the plumbi subacetatis liquor with glycerine instead of water." The solution thus obtained was intended as a "stock solution," to be diluted, as required, "with seven or three times its quantity of pure glycerine." The formula, as given in "Squire's Companion" does not differ greatly in strength from the weaker solution here given, the proportions being 2½ oz. of subacetate of lead and 12½ oz. glycerine. We cannot imagine that this difference in strength would produce serious results, but we think the formula as given in "Squire's Companion" is the one now generally followed.

### Apprenticeships.

Referring to the article on this subject which appeared in THE CHEMIST AND DRUGGIST of May 15, "W. M. L." asks:—

1. "After the full term of apprenticeship has expired, is the apprentice entitled to the indenture?"

2. "Does it matter whether the stamped paper that the indenture was written on was paid for by the master or by the apprentice or by his parents?"

To this we reply:—(1.) The indenture ought never to be held by the master at any time. As soon as it is executed by all the parties thereto it should be handed over to some other person, who will hold it on behalf of both parties, and who will hand it to the apprentice as soon as the master certifies that service has been duly rendered according to its terms. Our correspondent ought to ascertain who hold his indentures before he commences the legal proceedings which he contemplates. He may sue the person who detains his indenture after refusal to give it up to him, assuming that he has done his part; and if the master will not authorise the holder to give it up he also may be sued for maliciously withholding his consent. Usually the indenture is left with the solicitor who prepares it, and in that case there is seldom any difficulty. The question as to the amount of damages which could be claimed in consequence of the detention depends upon the circumstances of the case and the importance attached to the recovery of the indenture. If the plaintiff be entered for recovery thereof, or 5*l.* the value thereof, the verdict might be for the damages claimed and costs in proportion, the damages to be reduced to one shilling on delivery of the indenture to the plaintiff; but the costs would still have to be paid. In any case in which magistrates have jurisdiction a summons before them would be preferable; but this only applies to the case of an apprentice whose duties involved manual labour, and where either no premium was paid or the premium did not exceed 25*l.* (2.) The rights of the apprentice would not be affected whoever might pay for the stamped form of indenture.

Another correspondent asks: "What is the position of an apprentice to a firm if the firm dissolve partnership before the end of the term of apprenticeship?"

If the apprenticeship was to the firm, and one partner (or more) goes out, leaving any member or members of the original firm to carry on the business, the apprenticeship to the firm as altered must be served; and the same is the case when a partner dies: if the apprentice was bound to the firm, the surviving members are entitled to the benefit of the indenture. But this rule is subject to certain qualifications. The indenture and the covenants of the parent or guardian must have been entered into with the firm, and not with the retiring or deceased member; and the position of the apprentice must not be prejudicially affected by the change in the firm. For example, if the continuing members remove their business to a distant place, they cannot compel outdoor apprentices who have resided with their respective parents to go away where they would have to pay for board and lodging; but, on the contrary, the apprentice would be entitled to succeed in an action for damages against the old firm (or the members thereof) in respect of their breach of covenant in not teaching him the stipulated trade. The same result would follow on the dissolution of the firm, whereby the business was entirely given up.

M. G. asks:—"What time can a master compel (for compel it is—it is the sole remnant of cursed slavery) his apprentices to labour? Can he employ him more than twelve hours per day? After two o'clock on Saturday? On Sunday, Good Friday, Christmas Day, or Bank Holiday? That is to say, can the apprentice be treated as the master likes, or has the apprentice any right in any way whatever?"

[When "M. G." says that the power of a master over his apprentice "is the sole remnant of cursed slavery," he overlooks the obvious distinctions between a voluntary contract and slavery, properly so called. An apprentice ought to attend to his master's business during the regular business hours; and he may be required to work overtime to a reasonable extent in those trades in which overtime is customary. It would be unreasonable for an apprentice in a retail shop to refuse to serve customers after two o'clock on Saturday, especially in the country, where Saturday afternoon is generally the most busy time of the whole week. Sunday ought to be a day of rest, but an apprentice to a chemist and druggist could scarcely expect to be altogether excused from attendance on that day. The rule as to Christmas Day and Good Friday is somewhat similar. As to working twelve hours per day, it is impossible to lay down any universal rule: in some trades the hours of business are longer than in other trades.]

98/62. T. T. C. Ossett.—**Celandine** is the name of two British plants. The lesser celandine, or pile-wort, is a species of *ranunculus*, *R. flammula*, and flowers in early spring in damp hedgerows. The roots are shaped like green figs, or, as they thought in olden days, like hemorrhoids, for the cure of which they were consequently used. The greater celandine, or swallow-wort, *Chelidonium majus*, belongs to the poppy family, flowers about this time or a little later in hedgerows, and is remarkable for its opaque yellow juice. The legend is that swallows use this juice to remove the scales from the eyes of such of their nestlings as are blind. We know of no compound which bears the name.

### The Value of Chemists' Businesses.

#### To The Chemist and Druggist—

SIR,—We may, perhaps, be pardoned for answering the letter of your correspondent, "Suburban," although we have no wish to enter upon the discussion he desires to initiate. We would inform your correspondent that the regulation of the "buying and selling price" of drug businesses is not entirely so crude a performance as he seems to think, although he is to some extent led to the conclusion by reference to advertisements.

Those who buy upon a statement of gross receipts only, without going into the question of net profit, so far as our experience goes, are not numerous, and to think so would appear an unjust reflection on the intelligence of business men.

The sale or purchase of a business is an event which occurs but once or twice in the life of most men, and it would be somewhat surprising if with so little experience a buyer should feel himself competent to carry out a complete investigation for himself. On such a subject an unbiased and disinterested opinion is best, and upon this ground alone the buyer of a business might well hesitate in his purchase.

Vendors generally err on the right side, and any error in that way finds its level on judicious investigation.

In assessing the value of a business for purchase, the following features should be kept in view, viz.:—The class of business as compared with that in which the purchaser has been trained; net profit, and the proportion it bears to the gross return—upon this depends the value of the goodwill; value of stock, and fixtures; rent and value of lease; and it is of no small importance that every one, before deciding the question of purchase, should take into consideration the abilities of the person he is about to follow, and how far he is likely to succeed in filling his place; it is by no means a hard task to find those whom even good men would find it difficult to follow. We offer these few hints to "Suburban" as a slight explanation of the points which should be observed in arriving at the value of a business. To many they are not new, but to those who, like "Suburban," imagine that it is merely a question of gross receipts, they may be useful.

We are, sir, yours obediently,

ORRIDGE & Co.

Medical Transfer Agency, 32 Ludgate Hill, London, June 8.

**Surfeit Water.**—W. J. M. (11/29) wishes a form for surfeit water. The following is a form that was in great repute when I was an apprentice.

Yours respectfully,

Poole, May 16.

#### SURFEIT WATER.

T. W. ATKINS, Chemist.

Oil. menth. virid.	..	..	..	..	..	℥ij.
Oil. carni ..	..	..	..	..	..	℥ij.
S. v. rect. ..	..	..	..	..	..	℥iv.
Aq. pure ..	..	..	..	..	..	℥iv.
Syr. simplex ..	..	..	..	..	..	℥ij.

Dissolve the oils in s. v. r., add aqua, and filter; lastly, add the syrup.

### Prescription Tariff in Germany.

The author of the article on German prescriptions published in our April number (himself a German apotheker) sends us the following reply to Dr. Schacht's letter in our last.

Dr. Schacht's correction of my statement regarding the tariff in operation in Germany is right, in so far as the paragraph quoted from the *Gewerbe Ordnung* permits of abatement from the "tax price."

I believe, however, the *esprit de corps* prevalent in Germany prevents any advantage being taken of this permission, except when contracting for the supply to Government and charitable institutions.

The paragraph obviously does not sanction any excess of the tariff price; indeed, what would be the use of a tariff if it could be arbitrarily deviated from at the pleasure of the chemist, for whose guidance it has been drawn up?

28/38. *Vet.* is anxious to know whether the teaching of the Ontario Veterinary College is as sound as the British Colleges, and whether the chance of obtaining good practical knowledge is as good in Canada as in England.

89/41. *A.B.C.*—Bisulphite of Lime, not bisulphate, is used as an antiseptic by hutchers and others, especially by brewers. It can be purchased at a low price from wholesale chemists, but cannot be made economically on a small scale. In fact, it is almost a waste product in some industries.

56/88. *Cheshire.*—Russia Leather owes its colour to the birch and spruce bark, with which it is tanned. The essential oil of birch or spruce is used to imitate the odour, not the oil of ben.

88/43. *Euo.*—We understand that Dr. Rooke's Solar Elixir is a preparation of chiretta, though no formula seems to have been published. We have no idea of the composition of the Oriental pills. Euo's Fruit Salt, according to Mr. Blackett, M.P., of Victoria, Australia, consists of sodium bicarbonate and citric acid. (See *The Chemists and Druggists' Diary*, 1881, p. 92.)

### The Elevation of Pharmacy.

#### To The Chemist and Druggist—

SIR,—There appears to be a wonderful, and, apparently, unanimous, anxiety expressed by the Pharmaceutical Council to promote "the elevation of pharmacy."

As regards this district the representation of elevation in the Council is not disputed, and here the degradation of retail pharmacy is connived at and encouraged. The retail branch of the trade, which finds so large a proportion of the income of the Pharmaceutical Society, sees no cause for satisfaction in paying the travelling expenses of persons whose professions in the Council are contradicted by their policy out of it.

"The elevation of pharmacy," as viewed by certain members of the Council, is simply the elevation of a certain section of the trade, who, under the pretence of elevating pharmacy, are only scheming and manoeuvring to elevate themselves.

I am, yours obediently,

A MIDLAND CHEMIST.

[This letter is hardly fair. We do not know who is particularly alluded to, and others will perhaps know as little as ourselves. But if there is any member of the Council "whose professions in the Council are contradicted by his policy out of it," that policy might with perfect propriety be brought before the trade and challenged.—ED. C. & D.]

52/89. *Anti-quack* sends us an advertisement issued by the proprietors of Mother Siegel's Syrup, giving extracts from the letters of various chemists, who state how popular that medicine has become in their districts, and our correspondent asks, "Can it be possible these testimonials are genuine? or are we, as a body, going out of our minds?" The genuineness of the testimonials could be easily ascertained. For ourselves, we do not doubt it. As for the insanity involved, we confess we do not see it.

55/89. *B.H.*—The Smelling-salt Liquid "for sponge," generally, but erroneously, termed "inexhaustible," is a solution of aromatic oils in strong solution of ammonia. Various formulæ have been given for these solutions in our columns, a common form being something like the following:—

	Parts
Oil of lavender, rosemary, and bergamot, of each ..	1
Oil of cloves and cinnamon, of each .. ..	½
Strong solution of ammonia, to make .. ..	100

Mix. This, of course, may be varied to suit individual fancy.

89/62. *Chemist and Dentist.*—For the examination for L.D.S. sine curriculum, candidates must be already on the dentists' register. We believe you can obtain a syllabus by applying to the Royal College of Surgeons of Ireland, Dublin.

86/29. *H. J. Truro.*—Sheep-dip.—The subjoined formula, printed in *THE CHEMIST AND DRUGGIST* for November, 1878, p. 515, is for a really good dip, resembling that recommended by the Australian Government Commissioners appointed to report on the spread of scab in the colony:—

	Oz.
Common size .. ..	1
Soft soap .. ..	1
Melt together, and add—	
	Fl. oz.
Glycerine .. ..	1
Brown carbolic acid .. ..	1

To make a dip, dissolve 1 lb. of the mixture in 2 quarts of boiling water and add 2 gallons of cold water. The expired patent for MacDougall's sheep-wash is printed in abstract at page 95 of *THE CHEMIST AND DRUGGIST* for 1881; also that for Tomlinson & Hayward's sheep-dip.

38/38. *Leigh* would like to know the composition of the blue powder much used in Birmingham for clarifying lard.

85/22. *Apprentice.*—French Polish.—French polish may be made by dissolving ½ oz. of pale shellac in a pint of wood naphtha. The composition of the polish is of much less importance than the way in which it is applied. When first introduced in France about the beginning of the century it was known as "plating" wood, as the effect produced was similar to that of plating inferior metals with silver. By French polish varnish to be applied with a brush, we presume you mean a varnish which will produce similar effects to French polishing when thus applied. Nothing of the kind can be produced. A Brown, Hard Spirit Varnish, drying almost as soon as it is applied, can be made as follows:—

Sandarc .. ..	3 lbs.
Pale seed lac or shellac .. ..	3 lbs.
Spirit, methylated, 65 per cent. .. ..	2 gallons

Dissolve, and add of

Turpentine varnish .. ..	1 quart
--------------------------	---------

Shake well, strain quickly through gauze, and in a month decant the clear portion from the sediment.

Turpentine Varnish is made by dissolving 3½ lbs. clear pale resin in a gallon of oil of turpentine.

87/71. *J. E. S.* would be glad of a recipe for Beubow's alterative mixture for dogs.



# ZINCI OXYD. PUR.

(HARRIS'S),

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(Prepared by the Daughter of the late John Bond).

No heating  
required.

— THIRTEEN PRIZE MEDALS FIVE GOLD. —

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By Official Appointment to the QUEEN and COURT OF HOLLAND. Certificate of Merit signed H.R.H. PRINCE OF WALES.

By Royal Letters Patent.

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Sole Proprietor, J. HICKISSON, Son-in-law of the late John Bond.

#### WHOLESALE PRICES.

	Gross.
6d. Wrappers .. .. .	30/-
1/- " .. .. .	60/-
6d. Pedestals .. .. .	36/-
1/- " .. .. .	72/-

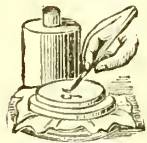


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	Gross.
6d. Blue Wrappers ..	30/-
1/- " .. .. .	60/-
6d. Pedestals .. .. .	36/-
1/- " .. .. .	72/-

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Deafness  
Writer's Cramp  
Loss of Voice

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Gout  
Constipation

Local Debility  
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&c., &c.

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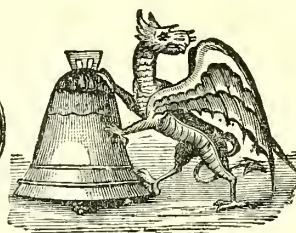


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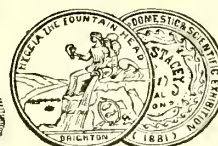


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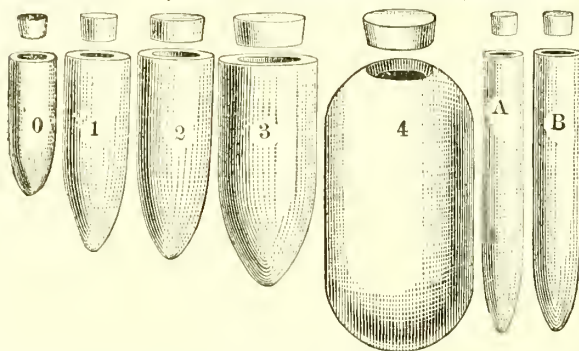
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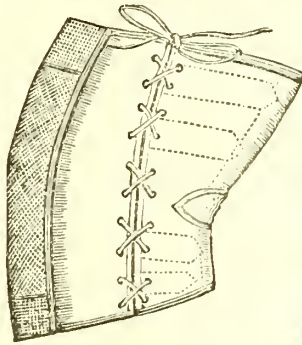
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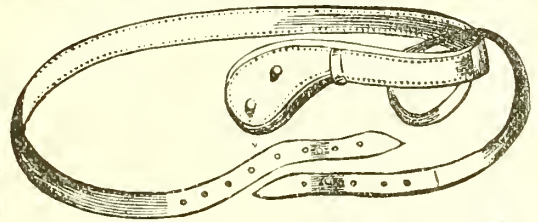
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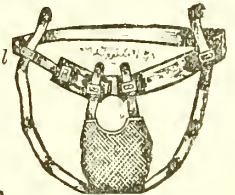


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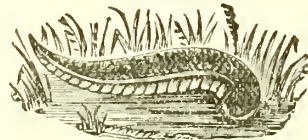
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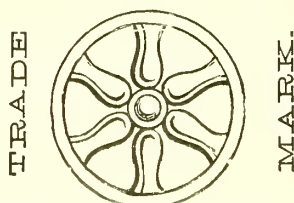
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AND SUNDRYMEN,

### CAPE TOWN.

LONDON AGENTS—

### MESSRS. DAVIS & SOPER,

BURY STREET, ST. MARY AXE, E.C.

## A. M. BICKFORD & SONS,

WHOLESALE DRUGGISTS AND

GENERAL IMPORTERS,

### ADELAIDE, SOUTH AUSTRALIA.

Cordial & Aerated Water Manufacturers.

PROPRIETORS OF BICKFORD'S COUGH ELIXIR.



The Chemische Fabrik auf Actien, vormals E. Schering, Berlin,  
MANUFACTURERS OF  
**SCHERINGS' PURE CHEMICALS**

## PARTICULARLY OF

ACID, CARBOLIC or Phenol Absolut. ... ..	Fine white hard crystals ... ..	Free from Cresylic Acid. Watery solution will not show greasy spots floating on top.
ACID, GALLIC ... ..	Almost white needles ... ..	Freely and entirely soluble in alcohol or water.
" PYROGALLIC ... ..	Bi-sublimed, white, bulky ... ..	Ditto ditto ditto.
" SALICYLIC (Kolbe's) ... ..	White, powder, crystallised, and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
" TANNIC ... ..	Lightest crystals ... ..	Dissolves almost colourless in water, alcohol, and ether.
" " ... ..	Powder and granulated ... ..	Dissolves freely in water, alcohol, and ether.
CELLOIDINE (Patent) ... ..	Gelatine plates ... ..	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE ... ..	White cake and crystal ... ..	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
CHLOROFORM (ex Liebreich's Chloral)	Schering's original label ... ..	Free from foreign chlorides. Will leave no odour on evaporation.
CROTON CHLORAL ... ..	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE ... ..	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE ... ..	Resublimed, fine scales ... ..	Purest.
ODOFORM ... ..	Dry yellow scales ... ..	Purest, by medical reports.
POTASS BROMIDE ... ..	Fine white dry regular crystals ..	Perfectly free from iodide, and the most free from chloride.
" CAUSTIC ... ..	Lump and stick, white ... ..	Commercially pure, and pure by alcohol.
" CYANIDE ... ..	Ditto ditto ... ..	30%, 45%, 60%, and 95%.
" PERMANGANATE ... ..	Large and small crystals ... ..	Chemically pure.
" IODIDE ... ..	Fine white dry regular crystals ..	Apply Barytic and other tests. This will never change colour.
SILVER, NITRATE ... ..	Fine large crystals ... ..	63 to 63½% pure silver.
SODA, CAUSTIC ... ..	Lump and stick, white ... ..	Chemically pure, and pure by alcohol.
SODA SALICYLATE, and other Salicylates	White powder and crystals ... ..	Freely soluble in water and alcohol.

## H. FINZELBERG, of Andernach-on-Rhine,

## MANUFACTURER OF

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed)	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%) ..	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

**SCHERINGS'**  
**PURE CHINOLINE AND ITS SALTS,**  
OR  
**ARTIFICIAL QUININE SUBSTITUTE.**

SOLE WHOLESALE AGENTS—

A. &amp; M. ZIMMERMANN, 27 MINCING LANE, LONDON, E.C.

For Quotations, &amp;c., apply to Wholesale and Export Drug and Chemical Houses.

ESTABLISHED 1741.

**BURGOYNE, BURBIDGES, CYRIAX & FARRIES,**

16 COLEMAN STREET, LONDON, E.C.,

**WHOLESALE DRUGGISTS**

AND

**DRUGGISTS' SUNDRIESMEN,****MANUFACTURERS OF PURE CHEMICALS, PHARMACEUTICAL, PHOTOGRAPHIC, AND OTHER PREPARATIONS,****IMPORTERS & DISTILLERS OF ESSENTIAL OILS.**

PRIZE MEDAL,



PARIS, 1867.



SILVER MEDAL,



PARIS, 1878.

**PRIZE MEDAL, SYDNEY EXHIBITION, 1879-80.**

Our Laboratories (*which are under the immediate supervision of one of the Principals*) are fitted with all the newest appliances, and we are enabled to execute indents at the shortest possible notice for every description of Drugs, Chemicals, and Pharmaceutical Preparations, of guaranteed purity.

**NEW REMEDIES STOCKED AS SOON AS INTRODUCED.**

We shall be glad to forward Samples gratis and give specially low quotations for Goods bought in bulk or original packages.

**Manufacturers of Concentrated Fruit and Soluble Essences.****SPECIAL QUOTATIONS TO LARGE BUYERS.**

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**SALICYLIC ACID and all SALICYLIC SALTS (after KOLBE'S Patent).****JOBST'S PURE QUININE, SANTONINE, &c.****KAHLBAUM'S PURE ALCOHOLIC COMPOUNDS.****PARKE DAVIS & CO'S AMERICAN PREPARATIONS.****MALTO PEPSYN.****DOSIMETRIC MEDICAMENTS of PROFESSOR BURGGRAEVE.**



# DR. LALOR'S PHOSPHODYNE,

(TRADE MARK — PHOSPHODYNE.)

TWENTY YEARS' SUCCESSFUL PUBLIC TEST, and THOUSANDS OF TESTIMONIALS from all parts of the World, establish

## PHOSPHODYNE

The only Safe, Prompt, Reliable, and Never-failing Phosphoric Remedy for Over-worked Brain, Sleeplessness, Harassing Dreams, Hurry, Worry, and Waste, Anxiety, Excitement of the Higher Nervous Centres, Wasting Diseases, Nervous Prostration, Stomach, Liver, and Kidney Complaints, Impure and Impoverished Blood, Premature Decay, and all morbid conditions of the system dependent upon the deficiency of the Vital Forces.

## DR. LALOR'S PHOSPHODYNE

Will keep in any Climate, and is therefore specially adapted for SHIPPING, and wherever introduced COMMANDS A LARGE SALE. DR. LALOR'S PHOSPHODYNE, from its immediate effects in cases of Exhaustion, Lassitude, Want of Stamina, Nervous Debility, and Malarial Diseases, HAS ATTAINED A VERY LARGE SALE in Africa, China, East and West Indies, the Colonies, Turkey, Asia, and other Hot Climates.

Sold in Bottles, at 4s. 6d. and 11s., by all Wholesale and Retail Medicine Vendors throughout the World. Manufactured only at the

## PHOSPHODYNE LABORATORY,

By DR. R. D. LALOR, London, N.W. (The sole Proprietor and Originator of Phosphodyne.)

A supply of suitable Printed Matter in any Language for distribution, also attractive Show Cards, will be sent for Enclosure to any London House on receipt of a Letter of Advice from Agents.

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## BARRON, SQUIRE & CO.

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BUSH LANE, LONDON, E.C.,

MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,

Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

*Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.*

## DUNCAN, FLOCKHART & CO.,

WHOLESALE AND EXPORT DRUGGISTS, EDINBURGH.

## CHLOROFORM

Prepared from Pure and Methylated Spirit.

Put up in all size of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

V.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

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SP. AMMON. AROMAT. | SP. ÆTHER. NITROS. | SYR. FERRI PHOS. CO. (PARRISH).  
Fluid Extracts, Concentrated Infusions, and all Pharmacopœial Preparations

MANUFACTURERS OF THE CELEBRATED

## BLUE BLACK WRITING INK & COPYING INK.

SHIPPERS SUPPLIED ON LIBERAL TERMS.

White Gutta Percha for Stopping Teeth, in 6d. and 1s. Boxes.

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AND

Manufacturing Chemists and Druggists' Sundriesmen.

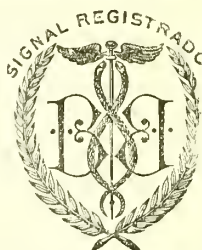
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QUALITY GUARANTEED BY  
AFFIXING OUR TRADE MARK  
TO EVERY PACKAGE.

TRADE MARK



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TO EVERY PACKAGE.

FOR EXPORT ONLY.

An exhaustive illustrated Export Prices Current, comprising every requirement of the Chemist and Druggist, will be published on the 1st of January, April, July, and October, and can be had by application (post free) on receipt of trade card. The attention of the trade is especially called to their preparations, including Extracts, Concentrated Decoctions, and Infusions, for which their name is so well established, and are guaranteed to be prepared with the utmost care from the finest drugs, and which will keep in hot climates for any reasonable length of time.

Manufacturers of Fruit Essences, which form a ready means when mixed with Acidulated Simple Syrup, of producing an article that has all the flavour of the freshly pressed fruit, and can thus be used with aerated water as a most refreshing drink in all hot climates.

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*Ethers, Alcohols, Liniments, and Tinctures shipped in bond at lowest market prices.*

Patent Medicines and Proprietary Articles at special net prices. Scientific and Philosophical Instruments. Surgical Instruments.

*Indents sent through Merchants should specially bear the name of BAISS BROTHERS & Co., and will be put on very best terms.*

## HEWLETT'S LIQUOR SANTAL FLAV. c. BUCHU et CUBEBA

PLEASE NOTE AND HAVE OUR ORIGINAL ARTICLE, WHICH MUST BEAR OUR SIGNATURE.

Since we introduced this elegant preparation it has been largely employed in the treatment of gonorrhœa and gleet, and with the happiest results. It is so much superior to copaivi, as it does not interfere with the digestive organs. The disagreeable eructation which follows the administration of copaivi is not experienced, and the unpleasant rash (*Urticaria*) has not been noticed. It is especially indicated in the advanced stages of gonorrhœa and chronic gleet. If it be given in the beginning, before the inflammation has fully developed, it may sometimes succeed in abating the attack, but if it fail to accomplish this it had better be suspended, as it may aggravate the symptoms during the inflammatory stage. In other inflammatory affections of the genito-urinary mucus membrane, such as pyelitis and chronic cystitis, when the disease is of a subacute or chronic character, the liquor santal may be employed with great advantage. Santal Oil has been the remedy of some eminent surgeons in the treatment of gonorrhœa, but in combination with buchu and cubebs it is much more efficacious. The great difficulty in its administration was its suspension in mixtures, but this trouble is arrested by a beautiful pharmaceutical process, and our preparation will be found perfectly miscible in water.

Price (in England) 10s. 6d. per pound, packed in 10 oz., 22 oz., 40 oz., and 90 oz. Bottles.

From Dr. GOURLEY, F.R.C.S., Senior Surgeon, Hartlepool Hospital.

"I have found your 'Liq. Santal Flav. cum Buchu et Cubebâ' invaluable in several cases of gonorrhœa, and more particularly in gleet. I consider it one of our best remedies in this frequently tedious complaint. It forms a nice mixture, and is quite free from the symptoms produced by copaiva.—S. GOURLEY, M.D., F.R.C.S., Senior Surgeon to Hartlepool Hospital.—To Messrs. C. J. HEWLETT & Son, Creechurch Lane, London."

## C. J. HEWLETT & SON,

MANUFACTURING AND PHARMACEUTICAL CHEMISTS,

(Late CREE CHURCH LANE.)

40, 41 &amp; 42 CHARLOTTE STREET, GREAT EASTERN STREET, LONDON, E.C.

ESTABLISHED 1832.

Physicians will oblige, when ordering *Liq. Santal Flav. cum Buchu et Cubebâ*, by writing "*Liquor Santal Flav. c. Buchu et Cubebâ (Hewlett's)*," as there are many imitations.

N.B.—Export Prices Current forwarded on application, giving most liberal terms.



# M. A. CRAVEN & SON,

## WHOLESALE AND EXPORT CONFECTIONERS,

MAKERS OF

### Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery,

IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS.

## EBOR CONFECTIONERY WORKS,

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Lozenges of all descriptions made from Customers' private formulæ (or ingredients), and stamped with any name or device.

SPECIALITIES—Cough, Peppermint, Rose, Musk, Bouquet, Cachou, and all kinds of Medicated Lozenges.  
ESTABLISHED 1843. PRICE LIST ON APPLICATION.

## TWENLOW'S CHLORODYNE NOTE.

Proportions of active ingredients—  
Morphine Mur. gr. iv. per f. oz. Acid.  
Hydrocyan. (Scheele's) m. viij. per f. oz.  
I beg most respectfully to draw your attention to my  
manufacture of Chlorodyne Pur. 25%.

Ingredients, as above, save at qualifications of active  
ties, its non-separating qualities its miscible proper-  
and strength; then note its price compared with its quality,  
equal, if not superior, to any other make of Chlorodyne  
extant, as attested by Surgeons and Chemists quite  
whole of Great Britain; its superiority over the  
Chlorodynes is alone the great cause of its being in such  
bottles free.

My price is—7/1b. net, in 1-lb. Bottles,  
Winchester, 6/9 lb. net, in 5 or 6 lb.  
Wholesale Manufacturer of Chlorodyne for Wholesale  
and Retail Houses, in large or small quantities, to their  
own recipes, guaranteed to be faithfully prepared, at  
remarkably low rates.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES  
OF CHLORODYNE. IT CAN BE ALTERED OR  
Carriage paid to any quantity, or £1 worth sent direct  
Liverpool upon any quantity, or £1 worth sent direct  
to any address in England, carriage paid.

Send for Samples. Prepared only by  
CHEMIST,  
Speciality, Proprietary, Medicated Lozenges,  
and Chlorodyne Manufacturer,  
91 UPPER BROOK STREET,  
MANCHESTER.

**RICHARD TWENLOW,**  
Speciality, Proprietary, Medicated Lozenges,  
and Chlorodyne Manufacturer,  
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## EVANS'S EXTRACT OF MALT.

Strongly Recommended in Asthma, Bronchitis, Consumption, Atrophy, Indigestion, and in Stomach Coughs.

(Vide Report of Professor Atfield, Ph.D., F.R.S., Professor of Chemistry to the Phar. Soc. of Great Britain.)

Nov., 1873.—"EVANS'S EXTRACT is incomparably more valuable than any preparation of Malt hitherto offered to the public."

## EVANS'S STYPTIC.

The introduction of this Preparation to the notice of the Profession for every variety of bleeding arose from the desire expressed by several eminent Physicians and many patients to obtain an efficient Styptic at a moderate price—Ruspin's celebrated Styptic being so costly.

P. C. SMYLY, M.D., &c. Surgeon to the Meath Hospital, writes:—"I find it of the greatest use, in fact, in every instance was equal, if not superior, to Ruspin's Styptic."

T. P. MASON, M.D., &c. Physician to Mercer's Hospital, writes:—"The Styptic you had the goodness to forward to me, I found highly advantageous in the Hemorrhage of Phthisis."

Circulars of these Preparations may be had on application.

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H.R.H. THE PRINCE OF WALES,  
49 Dawson Street, Dublin, Ireland.

AGENTS U.S.A.—WYETH & BROTHER. PHILADELPHIA.

## CHUBB'S SEIDLITZ POWDERS

—Full Weight—Loose, at 7s. per gross, and in boxes, at 8s. and 10s. per dozen.

## CHUBB'S VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 6s. 6d. gross, and 2d. Boxes, 12s. 6d. gross, and in 1/4-lb. and 1/2-lb. Packets, 10d. per lb.

## CHUBB'S FULLER'S EARTH

In 1d. Boxes, 5s. gross, and 2d. Boxes, 9s. 6d. gross, and in 3d. and 6d. Round Boxes, 2s. and 3s. 6d. dozen.

SUBJECT TO USUAL DISCOUNT.

May be obtained through all the Wholesale Houses, or direct from

**CHUBB & CO., 29 OLD ST., LONDON, E.C.**

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

## BENGER'S PREPARATIONS

These have received the commendation of the whole medical press, and are very largely prescribed by leading medical men at home and abroad. They consist of

1. **LIQUOR PANCREATICUS (BENGER).** For the preparation of Peptonised, or partially digested, foods at home. Bottles, 2/6, 4/6, and 8/6, with full directions for use.
2. **LIQUOR PEPTICUS.** A Concentrated Fluid Peptine of great activity. Dose, one to two teaspoonfuls with meals. Bottles, 3/6, 5/6, and 10/6.
3. **BENGER'S PEPTONISED BEEF JELLY.** A delicately flavoured, concentrated, and solidified Beef Tea, containing much of the fibrin in a soluble condition. Tins, 2/ each, will keep in any climate.
4. **BENGER'S SELF-DIGESTIVE FOOD.** For Infants and Invalids, an improvement on Liebig's Food; when mixed with warm milk, both the food and milk undergo partial digestion; it can therefore be enjoyed and retained when other foods disagree. Tins, 1/6, 2/6, and 5/ each.

BENGER'S PREPARATIONS may be obtained through all the leading Wholesale Houses, or of the Manufacturers—

**MOTTERSHEAD & CO.**

(S. PAINE AND F. B. BENGER),

PHARMACEUTICAL CHEMISTS,  
MANCHESTER.

**BURROUGH'S**  
SPIRITUS RECTIFICATUS P.B.

**SPIRITS OF WINE**

THE BEST ENGLISH GRAIN SPIRIT  
FREE FROM FUSIL OIL  
5 gallons 60 over proof at 20/1 net cash  
Special Quotation for Quantity  
DUTY FREE FOR EXPORT 4/4

**Best BURROUGH'S**  
Methylated Spirits  
Cale St Distillery  
CHELSEA, S.W.  
AT LOWEST PRICES  
BURROUGH'S

## METHYLATED SPIRIT AND FINISH

supplied of the best quality, to suit the requirements of all trades, by

**J. & W. HARVEY & CO., Distillers, Yoker, GLASGOW.**

London Agents—JAMES CHAMBERS & CO., 291 Old Street, E.C.,

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## JONES & MASON, METHYLATED SPIRIT MAKERS,

Regent Wharf, Copperfield Road, Mile End, London, E.

FROM RATCLIFF.

SAMPLES AND PRICES UPON APPLICATION.

## PURE SPIRITS OF WINE

FOR  
TINCTURES, ESSENCES PERFUMES, &c.,  
OXFORD ROAD DISTILLERY, MANCHESTER.

MESSRS. SMITH & GIBB

Beg to call the attention of CHEMISTS and DRUGGISTS to the under-mentioned Prices of Pure Spirits of Wine:—

Strength per cent.	Specific Gravity.	Price per gallon
63 over proof ..	0.8238	20/10
60 " ..	0.8298	20/4
55 " ..	0.8366	19/10
50 " ..	0.8482	19/4

Terms—Cash on Delivery. Jars to be returned or paid for.

For Exportation, Cask included, 4/0, 60 O.P., F.O.B.

Orders from the country must be accompanied with a remittance, including the price of the Jars, which are charged as follows:—2 galls. 3/-; 3 galls. 3/6; 4 galls. 4/-; 5 galls. 5/6; 6 galls. 6/-. When the empties are returned the money will be repaid.

**METHYLENE.**

Discovered to be a general Anæsthetic by  
Dr. RICHARDSON in 1867.  
1-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

**COMPOUND ANÆSTHETIC ETHER,**  
For producing Local Anæsthesia.  
In 4-oz., 10-oz., and 20-oz. Stoppered Bottles, 2s., 4s., and 7s.

**OZONIC ETHER.**  
4-oz. and 16-oz. Stoppered Bottles, 3s. 6d. and 12s.

**PEROXIDE OF HYDROGEN.**  
First introduced as a Medicine by Dr. RICHARDSON

**ETHYLATE of SODIUM**  
Dr. RICHARDSON'S Formula, for removing Nævi, &c. In 4-oz. and 1-oz. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. and 4s.

**STYPTIC COLLOID,**  
For promoting the Healing of Wounds by the first intention.  
In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.

**CHARCOAL CAPSULES,**  
Containing pure Vegetable Ivory Charcoal. In Boxes.  
2s. 6d. each.

J. ROBBINS & CO. OXFORD ST. 147

## WILLIAM GRAHAM CARR & SONS,

PHARMACEUTICAL CHEMISTS,

IMPORTERS AND WHOLESALE DEALERS IN COD LIVER OIL,

**BERWICK-ON-TWEED,**

ESTABLISHED 1794.

Oil made daily on the premises. Awarded Four Gold, Silver, and Bronze Medals in Three Years.

We shall be pleased to see any of our friends at our Stall in the International Fishery Exhibition, Kensington, to taste our samples.

**LOUIS ROWLAND (late Lutschaunig & Co.).**

**NITRATE OF SILVER**

NIT. OF SILVER.—3/4 per oz. for quantities over 10 ounces. Only one quality, absolutely pure 10-oz. packets will be forwarded by post for 30/10, and 4d. postage.

**CHLORIDE OF GOLD**

CHL. OF GOLD.—19/ per doz. 15-grain tubes guaranteed, and 4d. postage.

59 SOUTH JOHN STREET, LIVERPOOL.

## INDEX TO ADVERTISEMENTS.

See pages 39, 40.



# NEW ILLUSTRATED CATALOGUE

Now preparing, and will shortly be published, of the numerous accessories used or sold by Pharmacists, by

## A. B. CLARIN & CO.,

MANUFACTURERS OF AND DEALERS IN



## DRUGGISTS' SUNDRIES,

French and Foreign,

## 36 RUE SEVIGNÉ, PARIS.



This work will be distributed personally to every Pharmacien of good standing in France, Spain, Italy, Greece, and Turkey, by the representatives of the house, who regularly visit all those countries.

The object of this advertisement is to request correspondence from such British or American firms as may feel inclined to open business relations with the Continent.

We are willing to enter into negotiations with such firms, to receive samples of their goods, and to undertake the Agency for the same for the countries above mentioned, on conditions which can be arranged.

We are also prepared, for the convenience of those who may desire it, to undertake for them the manufacture of their specialties in accordance with

their instructions and following their patents. In such cases the fullest guarantees of good faith would be given, and expenses of duty, transport, &c.—often considerable—would be saved.

English and American Manufacturers of Druggists' articles are requested to observe that this means offers an excellent opportunity of introducing their Manufactures or Inventions to an entirely new clientèle.

We subjoin Tariff for Advertisements in the ILLUSTRATED CATALOGUE, and will be glad to send a specimen page to any firm applying for one:—

*Tariff for Advertisements in Illustrated Catalogue, including Translation into the French.*

Whole Page	...	...	...	£10 0 0
Half	„	...	...	6 0 0
Quarter	„	...	...	3 5 0

### EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & SONS are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (*vide* P. J. Vol. I. No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,

5 HATFIELD STREET, STAMFORD STREET, S.E.;

Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight

Wholesale and Retail by Messrs. Barclay & Sons, 95 Farringdon St., London.

## CHISWICK SOAP COMPANY,

CHISWICK, LONDON, W.,

# SOFT SOAP

MANUFACTURERS, WHOLESALE AND EXPORT.

### "IMPERIAL" SOFT SOAP

Manufactured specially for Domestic use, and packed in 1, 2, 3, 3½, 4, and 7 lb. Tins.

### "FINEST PALE" „

} Very pale Amber colour, odourless. Packed in barrels, firkins, half-firkins, and 14-lb. tins.

### "BBB," "BB," "BL," „

} The usual qualities, and kept in all packages to suit buyers.

### CARBOLIC „

} Contains 10% Calvert's No. 5 Acid. For Dogs and Cattle, making Sheep Dip, and general disinfecting purposes. Packed in 1, 2, 4, and 7 lb. tins; 14, 28, 56, and 112 lb. iron drums.

### OLIVE „

} The B.P. "Sapo Mollis," made from finest Olive Oil and pure Potash, in tins, firkins and jars.

# GIBSON'S

**DELECTABLE JUJUBES, VOICE JUJUBES, AND GLYCERINE PASTILLES**

Put up in 4-lb. Decorated Tins with Glass Lids, *TINS FREE*, are now being inquired for by buyers from all parts of the world. They are not surpassed in quality by any maker, and give entire satisfaction.

**MEDICATED and HIGH-CLASS LOZENGES, of every kind.**

Sent out in 2-lb. or 4lb. Bottles, Bottles Free; or in Tins, from 10 lb. upwards.

**LIME JUICE TABLETS.**

**PURE MALT TABLETS**

**ACID DROPS, AND BEST QUALITY BOILED SUGARS OF EVERY KIND.**

**GIBSON'S ORIGINAL CHLORODYNE LOZENGES.**

**PENNY SUGAR WORM CAKES**, suitable for either *children* or *adults*. Have an immense sale, keep in any climate, and please everybody. Manufactured by

**ROBERT GIBSON, Carlton Works, Hulme, Manchester, and 1 Australian Avenue, London.**

*Price Lists sent on application. Our Goods can be bought through any Wholesale or Export House in London. Indents should be marked "Gibson's."*

**JAMES WOOLLEY, SONS & CO.,**

**DRUG MILLERS**

AND

**Manufacturing Pharmaceutical Chemists,**

IMPORTERS OF THE

**"EXTRA PALE" COD LIVER OIL.**

**SPECIALTIES.**

**SPIRITUS ÆTHERIS NITROSI, B.P.,**

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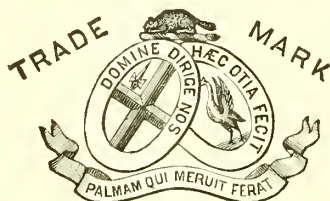


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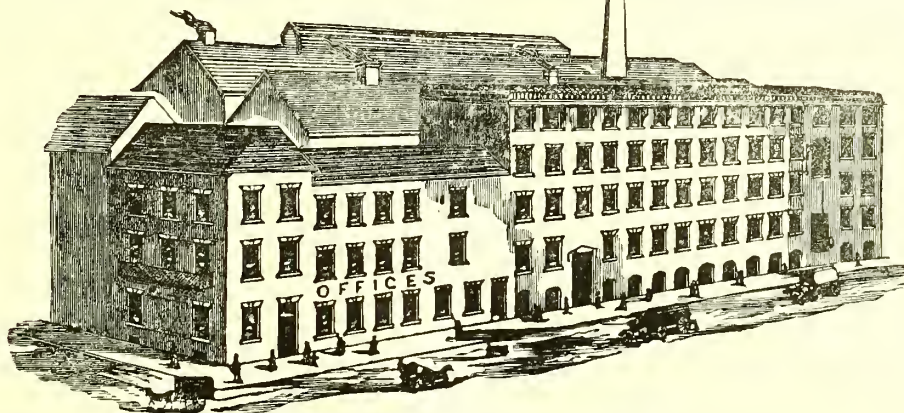
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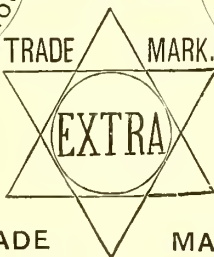
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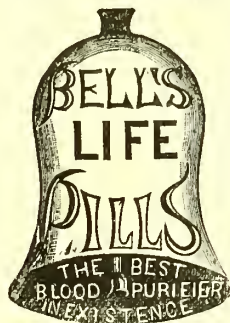
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Pure Chemicals of every description for Technical, Manufacturing, and Scientific Purposes.

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Price per gross, £11 8s., box free, cash with order, carriage paid. Export cases charged 5s. each, delivered f.o.b.

Remittance in full must accompany orders. For less quantity than 1 gross buyers will please write their Patent Medicine House or Wholesale Druggist.

**SPECIAL QUOTATIONS FOR PARCELS OF FIVE GROSS AND TWENTY GROSS.**

ONE DOSE of Tikheel will in fifteen minutes generally remove the most severe form of Neuralgia; one bottle will effect a cure.

Tikheel is a **SAFE MEDICINE**, thus differing from most advertised remedies.

The word "Tikheel" is stamped on every bottle, the label is pale buff colour, with the Trade Mark (the back of a watch) in pale yellow underlying the printed matter. Any infringements of label or imitations of the word "Tikheel" will be rigorously proceeded against, being protected by the Trade Mark Act, &c.

*The Proprietors respectfully request perusal of the following genuine Testimonials, being a selection out of a very large number which are daily received:—*

From The Rev. A. ORLANDO CHERRINGTON, Vicar of Tividale, Tipton,  
writes, March 27, 1883.

Gentlemen,—Your valuable preparation "Tikheel" has been effectual in curing three cases of Neuralgia in my parish, one of two years' standing, in which extraction of teeth, &c., had no effect, various other remedies had been tried in vain; another of a very excruciating nature; and my own, which has been of frequent occurrence for some time.

From Mr. THOMAS CROSS.

The School, Poppleton, York.

Dear Sirs,—I have suffered a long time from Neuralgia, which periodically attacks a decayed tooth. Lately I have tried "Tikheel," which, after the third dose, entirely removed the pain, and now at an interval of two months I have only had one very slight attack. I have found local applications of no use whatever in the past, and remain, yours faithfully,  
To Messrs. Bleasdale & Co., Chemists, York. THOS. CROSS.

The Editor of the "WHARFEDALE AND AIREDALE OBSERVER" sends the following unsolicited:—

Gentlemen,—Your "Tikheel" is indeed a most remarkable medicine. I am not one who places much faith in the efficacy of the numerous so-called remedies for Neuralgia, and I was therefore not very sanguine of getting relief from your "Tikheel," but having suffered severely for several weeks past from Neuralgia, I was induced to make a trial of the medicine. In a quarter of an hour after taking the first dose the excruciating pain abated and I have had no return of it since. I am certain this medicine only requires to be generally known in order to be widely used and appreciated.

From Mr. Councillor RAWLING, York.

5 Swinegate, York, July 17, 1882.

Gentlemen,—I have great pleasure in giving testimony to the great benefit to be derived from your "Tikheel." I was very bad with Tic, but a dose of "Tikheel" cured me in half-an-hour. I cannot speak too highly of it.—Yours truly,  
FRANCIS RAWLING (Town Councillor).

From Mr. CHAS. HAIGH, Skep Maker, Buresfield Road, Huddersfield.

Gentlemen,—My wife having been a very great sufferer for some time from Tic and Neuralgia, and having tried a good many medicines without receiving any benefit, was induced by Mr. Bygott, Chemist, to try a bottle of "Tikheel." Strange to say, after taking three doses of the medicine she was completely cured, and has not had the least pain since.

You are at liberty to make any use of this testimonial you think proper, as I think every one should know there is such a certain and rapid cure for Neuralgia.

From Mr. THOS. HORROCKS, Temperance Lecturer, Darwen.

10 Melita Terrace, Darwen, February 1, 1883.

Gentlemen,—My daughter has been troubled very much with Neuralgia for the last six months, and having seen your advertisement in the paper, I purchased a bottle of your "Tikheel." I am glad to say the first dose gave her immediate relief, and after taking one small bottle, she was completely cured, and has not had an attack since.—Believe me, Gentlemen, yours gratefully,  
THOS. HORROCKS, Temperance Lecturer,  
Western Temperance League.

Messrs. Clarke, Bleasdale, Bell & Co., York.



# TOWLE'S CHLORODYNE

The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

Retail at 13½d., 2s. 9d., and 4s. 6d. Dispensing, 4 ozs., 4s. 6d., and 10 ozs. 11s., stamped.

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In 1, 2, and 4 lb. Bottles, at 3s. per lb., and 6d. and 1s. Boxes. Foiled, Lined and neatly got up for the counter, 4s. 6d. and 9s. per doz.

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## A CERTAIN CURE FOR DEAFNESS.

By this valuable "Specific" hundreds have been cured of this distressing malady. For Cold in the Head with Noises in the Ear, it is most efficacious. The highest testimonials are enclosed, with directions for use with each bottle.

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REGISTERED  
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"EDGEASTON, MAY 4, 1877.—Sir,—My niece, who came to stay at my house, was suffering from Deafness and difficulty of breathing, owing to weakness of the tonsils caused by Quinsy. She tried your wonderful 'Specific,' and after applying it a little more than a week her hearing and breathing were quite restored. I am glad to communicate this as the medium of personal thanks and for the good of others.—Yours truly, C. L."

"CLAPHAM, SEPT. 5, 1877.—Sir,—Be so good as to send me six bottles of your 'Cure for Deafness,' and you will oblige. I am much better. Shall I go on with it? Be so good as to let me know. It has done me more good than physicians to whom I have paid twenty guineas; they cannot do me any good.—Yours, &c., J. P."

"CRYSTAL PALACE ROAD, EAST DULWICH, JUNE 10, 1878.—Sir,—During the last few weeks my little girl has been quite deaf, and suffering considerable pain in her left ear. I was recommended to use your 'Golden Drops for Deafness,' and I am delighted to say that, after applying them three times, they brought away two large secretions of foul matter. The child can now hear distinctly the faintest sounds, and is free from pain. I send you this testimonial unasked, in the hope that its publication may increase the sale of your truly valuable 'Golden Drops.'—Yours respectfully, I. H. S. N.B.—If you will send me some testimonial sheets I will distribute them amongst my friends."

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MESSRS. CONYNGHAM & CO. are convinced many Homœopaths would prefer the use of Tinctures to Pilules, were it not for the inconvenience experienced in dropping them, and the necessity of water for the administration of each dose; consequently they have introduced these **ABSORBENT WAFERS** as a successful mode of meeting this difficulty.

These Wafers are so prepared that, when placed over the mouth of the bottle (which is carefully tilted), they absorb the usual dose. The Wafer is then immediately placed upon the tongue to dissolve like an ordinary Pilule; thus at once dispensing with the trouble of dropping and the use of water.

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### FINCH, RICKMAN & CO.'S

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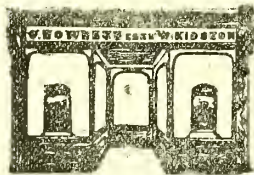
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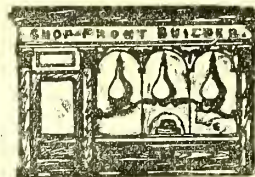
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January 1, 1883.

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**FIXTURE DEALER, &c.,**

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All Orders, Letters, Telegrams, &c., promptly attended to.

The FACTORY, 46 DE BEAUVOIR CRESCENT, is carried on as usual.

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Fitted complete with all New Goods, including Glass Show Cases, Gold-Labelled Shop Bottles, Jars, Carboys, &c. If for Export, suitable for any climate, including packing cases, and delivered to any of the London Docks free, £85. The above fittings are suitable for a shop 14 ft. long by 12 ft. wide.

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*Plans and Estimates  
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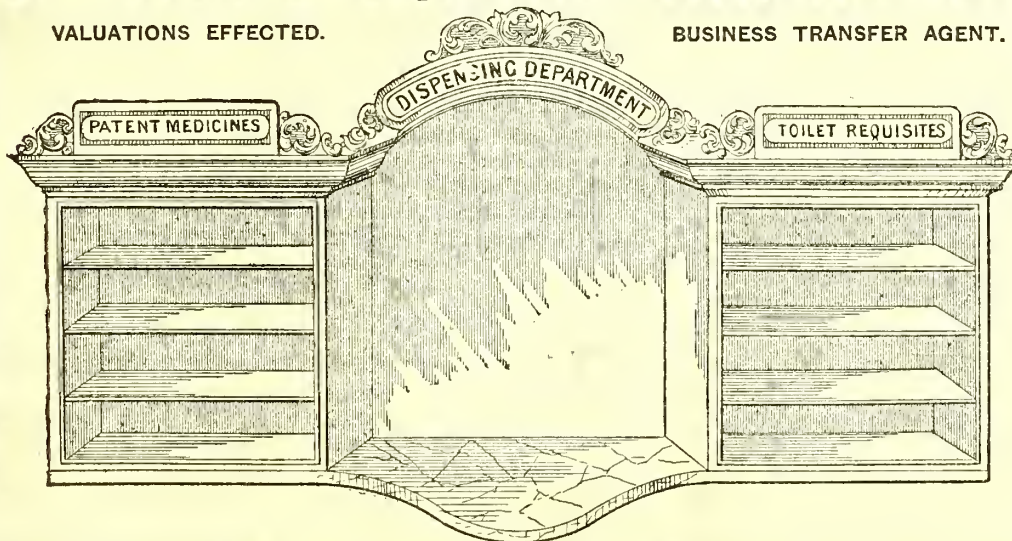
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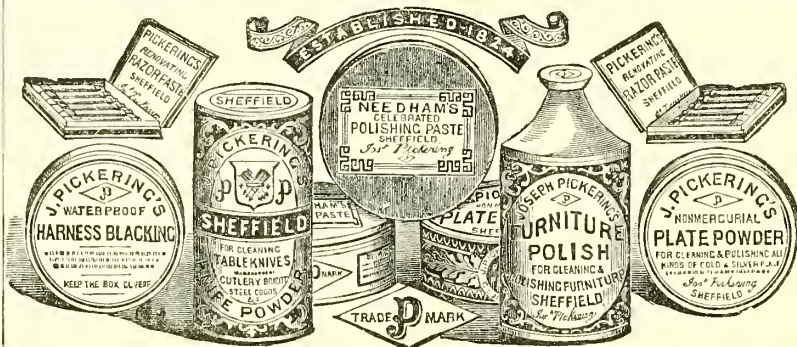
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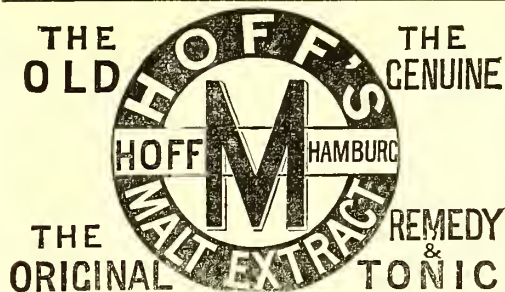
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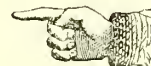
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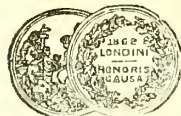
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FEEDING BOTTLES, GLASS MEASURES, SYPHONS, VAN BOXES & CASES.

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**FRENCH SCREW GLASS POTS & BOTTLES,**  
WITH METALLIC NICKLED CAPSULES.

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WHOLESALE AND EXPORT AGENTS—S. MAW, SON &amp; THOMPSON, 7 TO 12 ALDERSGATE STREET, LONDON, E.C.

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Possesses the following ADVANTAGES over the Adhesive Plaister in general use:—

1. It is always soft and pliable.
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Stamped and Verified as required by the Weights and Measures Act.

1 dr. 2dr. ½oz. 1oz. 2oz. 3oz. 4oz. 6oz. 8oz. 10oz. 20oz. 40oz.  
9/6 11/6 9/ 10/3 11/6 13/ 14/6 18/ 19/ 21/ 29/ 39/ per doz.

CAUTION.—Each Measure manufactured by me bears my name as a guarantee.

**GRADUATED MEDICINE GLASSES**

IN GREAT VARIETY.—See Price List.

**INCORRODIBLE WHITE METAL SCREW-  
TOP BOTTLES,**

Suitable for Vaseline, Pomades, Glycerine, Jelly, &amp;c., &amp;c.

**DISPENSING BOTTLES,**

Warranted Accurate Measure and Graduation.

SPECIAL ARRANGEMENTS MADE FOR LETTERING ABOVE WITH NAME, &amp;c.

**TOOGOOD'S NEW SHAPE BURNT-IN  
COLD CREAM POTS,**

WITH CLIENT'S OWN NAME BURNT IN.

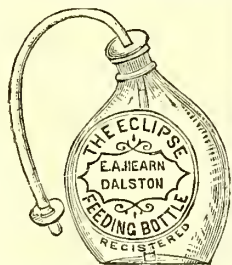
**SPECIAL DESIGNS.**

PRICES AND SPECIMENS UPON APPLICATION.

*Illustrated Price List of Glass Bottles, Earthenware,  
Druggists' Sundries, &c., forwarded upon application.*



Feeding Bottles.  
The "ECLIPSE."



White Fittings, 30/ per gross.

Best Black Fittings, 38/ per gross.

The above are put up in One Dozen Wood partitioned Boxes.

# HEARN, RIDDELL & CO., Glass Bottle Manufacturers, 381 KINGSLAND ROAD, LONDON, E.

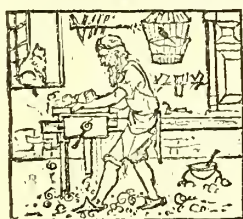
GLASS BOTTLES of EVERY DESCRIPTION, either PLAIN or STOPPERED, made in WHITE, BLUE, AMBER, ACTINIC GREEN, or any other colour required.

SYRINGES, GRADUATED MEASURES, FUNNELS, &c.

SPECIAL ATTENTION GIVEN TO QUALITY.

*Quotations, post free, to any part of the world on application.*

The above will be found the BEST and CHEAPEST House in the trade.



A willing mind makes light employment.

## BOWLING & GOVIER (Late Partners with FILMER KIDSTON), MEDICAL SHOP FITTERS & CASE MAKERS.

Our friends are kindly requested to notice our REMOVAL TO NEW WORKSHOPS, where alone our Special Class Manufacture can now be obtained.

THE ART JOINERY WORKS, 22 GUN ST., BRUSHFIELD ST., BISHOPSGATE, LONDON.

*Send for Estimates, also for List of the Shops Fitted in our Modern Style.*



Labour well planned is half done.

## THE DUPLEX LEVER CAPSULE CO., LIMITED,

ARE NOW PREPARED TO SUPPLY THEIR

## PATENT "SPRING LOCK" CAPSULE STOPPER.

Instantaneously self-locking. Saves 75 per cent. of time in stoppering. Can be put on and taken off repeatedly. Is handsome, efficient, and cheap. Neither corkscrew, wire, wax, indiarubber, broken corks, nor dirt. Is absolutely air and water tight.

For Chemical preparations, Citrates, and Salines, it is without an equal, being absolutely air-tight, and no dearer than the present inefficient stoppers.

FOR PRICES AND PARTICULARS APPLY AT THE CHIEF OFFICES:

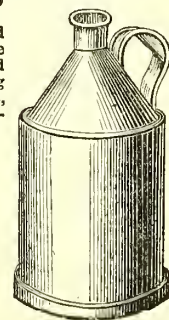
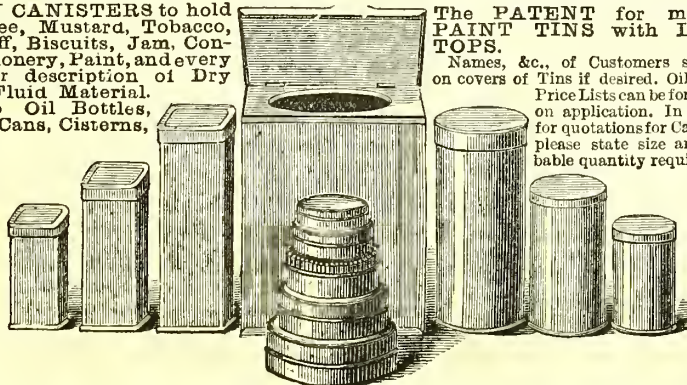
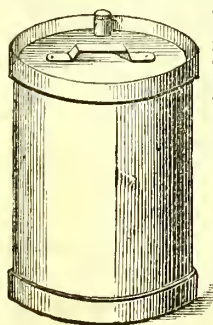
5 COPTHALL BUILDINGS, LONDON, E.C.

## W. B. WILLIAMSON & SONS, Providence Works, WORCESTER,

MANUFACTURERS OF  
TIN CANISTERS to hold  
Coffee, Mustard, Tobacco,  
Snuff, Biscuits, Jam, Con-  
fectionery, Paint, and every  
other description of Dry  
or Fluid Material.  
Also Oil Bottles,  
Oil Cans, Cisterns,  
&c.

PROPRIETORS OF  
The PATENT for making  
PAINT TINS with LEAD  
TOPS.

Names, &c., of Customers stamped  
on covers of Tins if desired. Oil Bottle  
Price Lists can be forwarded  
on application. In writing  
for quotations for Canisters,  
please state size and pro-  
bable quantity required.





# HEPATICUS,

FOR JAUNDICE AND ALL LIVER COMPLAINTS.

Biliousness, Indigestion, Weakness, Sick Headache, Loss of Appetite, Nervous and Dyspeptic Affections, General Debility, Spasms, &c.

It quickly cures the above complaints of however long standing. PURIFIES AND CLEANSSES THE BLOOD, and gives to the system a healthy tone. NO CHANGE OF DIET IS REQUIRED. Those with weak constitutions may take it with entire confidence, it being adapted to all ages of either sex.

Sold in Bottles 2s. 9d. each.

In all Countries this Medicine is invaluable, but more so in the Tropics, India, and all Hot Climates, and we particularly call the attention of Shippers and our friends in the Colonies and Abroad to it.

For Terms apply to the Proprietors—TOMLINSON & HAYWARD, Lincoln, England.

Manufacturers of the "Glycerine Dip" for Sheep, "Fly Powder," "Butter Powder," "Castor Oil and ordinary Sheep Ointments," the Original Luddington Oils for Horses, Sheep, and Cattle, &c.

PRINTED MATTER AND TERMS SENT ON APPLICATION.

# CHLORIDE OF LIME.

IN WATERPROOF, AIR-TIGHT, & ODOURLESS PACKAGES. Protected by Royal Letters Patent.

Is neat and clean, and convenient for use. Being air-tight and odourless, retains its strength unimpaired.

IT IS ADMIRABLY ADAPTED FOR EXPORT, AND WILL

KEEP FOR YEARS IN ANY CLIMATE.

Per Box.

24-lb. BOXES, containing 24 1-lb. Packages	.....	6/6
Ditto ditto 48 ½-lb. ditto	.....	7/0
Ditto ditto 96 ¼-lb. ditto	.....	8/0
Ditto ditto 1-lb., ½-lb., & ¼-lb., assorted	.....	7/3
Ditto ditto 1 Gross Penny Packages	.....	8/0

Per Case.

50-lb. CASES, containing 50 1-lb. Packages	.....	13/0
Ditto ditto 10 5-lb. ditto	.....	13/0
Ditto ditto 100 ½-lb. ditto	.....	14/0
Ditto ditto 200 ¼-lb. ditto	.....	16/0
Ditto ditto 1-lb., ½-lb., & ¼-lb., assorted	.....	14/6

Also in 1 cwt. and ½-cwt. Cases, to meet the requirements of large buyers and the Export Trade.

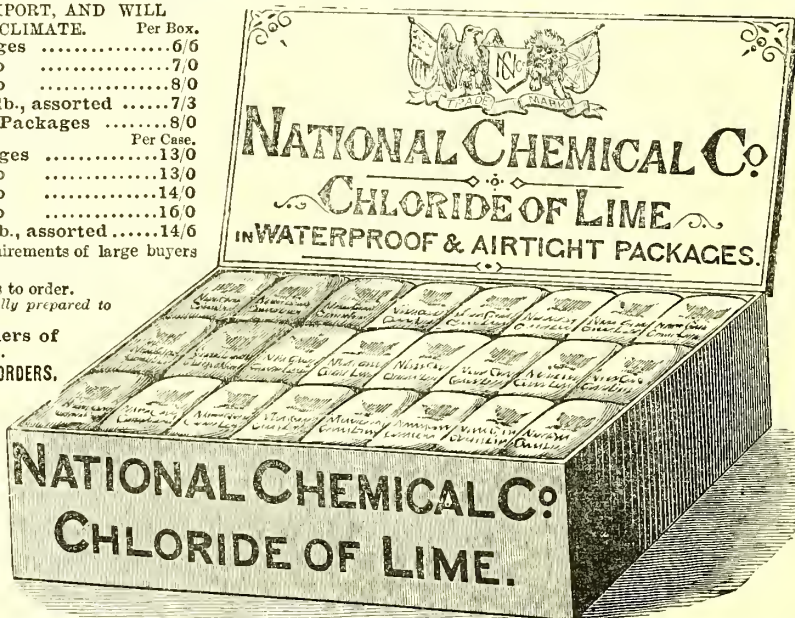
Packed also in Jars, Bottles, Casks, and Cases to order. The Patented Composition for Export Orders is specially prepared to bear any Climate.

A Liberal Discount allowed on all Orders of 5 Cases or 10 Boxes and upwards.

SPECIAL QUOTATIONS FOR CONTRACT OR LARGE ORDERS.

## WHOLESALE AGENTS.

London: S. Maw, Son & Thompson; Barclay & Sons; J. Newbery & Sons; W. Edwards & Son; J. Sanger & Son; Lynch & Co.; Harvey, Shepherd & Co.; Evans, Lescher & Webb; Burgoyne, Burdidge & Co.; Dury, Yates & Routledge; Howden & Sons; Wright, Layman & Umney; Hearon, Squire & Francis; Hodgkinson, Stead & Treacher. Liverpool: Evans, Sons & Co. Manchester: James Woolley, Sons & Co. Birmingham: Southall Bros. & Barclay. York: Raimes & Co. Edinburgh: Raimes, Blanchard & Co.



SAMPLE BOX OR CASE CAN BE HAD FROM ANY OF OUR WHOLESALE AGENTS OR ANY LONDON OR COUNTRY WHOLESALE DRUGGISTS. ALL GOODS DELIVERED FREE IN LONDON.

NATIONAL CHEMICAL CO., 29 Suffolk Grove, Gt. Suffolk St., Southwark, S.E.

## DRUGS, CHEMICALS & PHARMACEUTICAL PREPARATIONS.

## OLDFIELD, PATTINSON & CO.

(Late WILLIAM MATHER),

WHOLESALE AND EXPORT DRUGGISTS,

37 LONG MILLGATE, MANCHESTER.

SPECIALITIES.—Concentrated Infusions, Liquors and Decoctions, Soluble Essences of Ginger Capsicum, Ginger Ale, Lemon, Orange, &c., for the Mineral Water Trade.

## DALMATIAN INSECT FLOWERS AND POWDER.

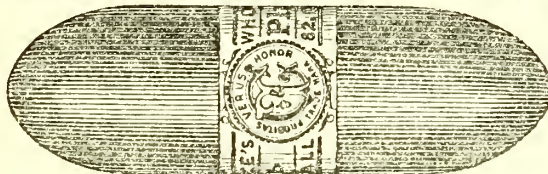
PRICE LIST CAN BE HAD ON RECEIPT OF BUSINESS CARD.



**DRUGS, CHEMICALS, PHARMACEUTICAL PREPARATIONS.****GABRIEL & TROKE,**

Wholesale and Export Druggists and Manufacturing Chemists,  
82 CITY ROAD, LONDON.

# **GABRIEL & TROKE'S REGISTERED CAPSULED HORSE BALLS,**



Manufactured solely by **GABRIEL & TROKE,**  
WHOLESALE DRUGGISTS, 82 CITY ROAD,  
LONDON.

MANUFACTURERS OF ALL VETERINARY PREPARATIONS, EVERY KIND OF  
VETERINARY INSTRUMENTS AND SUNDRIES.  
SAMPLES AND SPECIAL QUOTATIONS FOR LARGE BUYERS.

The superior advantages of these Balls are obvious. The mass is confined in a hermetically sealed gelatinous Capsule, perfectly harmless, and immediately dissolved in the stomach. The Capsule will not only prevent the ball from getting dry and hard, but will preserve its purity and power for any reasonable time, and ensure the effectiveness of the medicine—especially when such drugs as Camphor Ammonia, or Essential

Oils are prescribed. These Capsuled Balls are most convenient and safe and well adapted for export, keeping good in any climate. They are put up in Boxes of 1 dozen each. Capsuled Balls of the most approved formula on hand, and private recipes faithfully and accurately dispensed. Shipping orders promptly and carefully executed, and at lowest market prices. Price Lists of a very extensive character in the most handy readable style on application.



"FOR PIGS, IN HEALTH, FOR PIGS IN DISEASE."

**CALVERT'S PIG POWDERS**

Are a certain remedy for all ailments to which Swine are subject  
(especially Swine Fever).

They allow a fair margin of profit to the retailer. Wholesale and Export of Patent  
Medicine Houses, or Proprietor—

**J. H. CALVERT, 57 Geneva Road, BRIXTON, LONDON, S.W.**

Beware of Spurious Imitations. Each Powder protected by the Registered Trade Mark.

## **COOPER'S SHEEP DIPPING POWDER**

Is soluble in Cold Water, and should be used in  
preference to any other Dip,

**FOR TICKS, FLY, SCAB, AND FOR ALL OTHER  
SHEEP DIPPING PURPOSES.**

This Dip has been in use for Forty Years, and has never been equalled by any other; it is of uniform strength, does not stain the wool, is suitable for all climates, and is equally good as a Summer or Winter Dip. It is especially recommended for Dipping Lambs, and as a certain Cure for Scab.

It supersedes all Carbolic and other Liquid Dips, being so much more reliable and lasting in its effects.

Counter Bills and Directions in English, Spanish, Dutch, &c., may be had free on application.

## **COOPER'S FLY POWDER**

For Preventing the Fly Striking Sheep & Lambs,  
Destroying the Maggot, &c.

In 1-lb. Packets, to Retail at 6d.; and 2½-lb. perforated  
Canisters, to Retail at 1s. 4d.

This Powder may also be had labelled with the Retailer's own  
Name and Address, provided not less than one gross packets or  
6 dozen canisters be taken at once.

SPECIALLY LOW QUOTATIONS FOR QUANTITIES IN BULK.

Samples on application.

Terms and further particulars may be had of the Proprietor,  
**WILLIAM COOPER, M.R.C.V.S., Chemical Works,**  
Berkhamsted, Herts.

**MYOCOM**

**GUM.**

A STRING, Straw, or Twig lightly  
covered with this preparation  
(non-poisonous), and suspended from  
the ceiling, will keep any apartment  
free from FLIES, WASPS,  
GNATS, &c. &c.

"It is most efficacious, and catches even  
wasps."—*A. Ainslie*. "The most perfect Fly  
Catcher he has ever used."—*Admiral Stumarez*.  
"Really invaluable."—*Capt. Sarsfield*. "The  
first tin caught over 500 flies in half-an-hour."  
—*T. C. Taylor*. "Everyone asks about it."—  
*E. Philp, Coffee Palace, Maidstone*. *Mrs. Wal-*  
*ton's* servants are delighted with it.

Of all Chemists, in 1s. tins, or by post for  
1s. 2d. from the wholesale proprietors:—

**T. CHRISTY & CO.,**  
155 Fenchurch Street, E.C.

Price 8/ per gross, packed in 1-gross and ½-gross boxes.



LONDON WHOLESALE AGENTS, MAY, ROBERTS & Co., 9 CLERKENWELL RD.



## EDWIN HELLIAR, MANUFACTURING CHEMIST, YEOVIL,

Beget to call the attention of the trade to the following specialities, which will be found worthy of a place in the stocks of all Chemists, and the favour of an order, either direct or through the leading London Houses, will much oblige.

Fly Tick and Lear Powder, for dressing Sheep and Lambs .. .. in tins, 1/2, 3/6  
Foot Rot Paste .. .. pots, 1/2, 2/6  
Condition Powders for Horses .. .. tins, 2/6, 4/6  
Canino or Dog Soap .. .. 6d.  
Worm Powders for Dogs .. .. 6d.  
Balsam Honey for Coughs .. .. 7½d., 1/11, 2/9  
Vermin Killer .. .. 3d., 6d., 1/

London Wholesale Agents:—HOVENDEN & SONS, BARCLAY & SONS,  
SANGER & SON, W. EDWARDS & SON. Exeter:—EVANS, GADD & CO.

### USUAL TERMS.

## FOSTER'S PEARL-COATED ROUP PILL

Retail, 2d., 6d., 1s., and 2s. per box.

These Pills have found great favour wherever introduced, being a successful remedy for this troublesome complaint, the price, 2d., placing them within reach of the poorest keeper of Fowls, supplying a want long in demand, the high prices usually charged precluding all but the well-to-do Fancier.

An Agent wanted in every Town. Sample dozen of the 2d. size, post-free, 1s. 6d.

Agents' addresses periodically advertised in the Poultry Papers, thus bringing them directly before the notice of consumers.

Wholesale Agents: London: W. Edwards & Son, 157 Queen Victoria St., E.C.; Wyleys & Co., 223 Upper Thames St., and Coventry; Southall Brothers & Barclay, Birmingham; Whitehead, Hulbrook & Co. (successors to W. Mather), Manchester.

PROPRIETOR:

F. F. FOSTER, Navigation Street, BIRMINGHAM.

REGISTERED

## SOLUBLE FIR-TREE OIL INSECTICIDE.

For destroying all insects and parasites that infest fruit trees and plants, whether at the roots or on the foliage—such as green and black fly, thrip, red spider, American blight, scale and mealy bug, and caterpillars on gooseberry trees and cabbages, &c., &c. Full directions for use on each bottle.

**FIR-TREE OIL** will cure ringworm, itch (scabies), and nearly all skin diseases, especially those produced by parasites and fungoids, when applied full strength with a brush or sponge once a day.

**FIR-TREE OIL** diluted with water will destroy lice, fleas, and all parasites which affect animals.

**FIR-TREE OIL** diluted with water stands unrivalled as a wash for dogs and other animals intended for show.

Sold in Bottles ..1/6, 2/6, 4/6, 7/6, and 12/6 each.  
Wholesale .....12/, 20/, 36/, 66/, and 120/ doz.

WHOLESALE.—BARCLAY & SONS, and EDWARDS & SONS, London;  
RAIMES & CO., Edinburgh and York; EVANS, SONS & CO., Liverpool;  
and D. McLAREN, Edinburgh.

MANUFACTURER:—

**E. GRIFFITHS HUGHES,**  
OPERATIVE CHEMIST,  
VICTORIA STREET, MANCHESTER.

# THE MONTSERRAT COMPANY, LIMITED,

LIME - FRUIT  
JUICE.

TRADE



MARK.

LIME-FRUIT JUICE  
CORDIALS.

ALL GUARANTEED

FREE FROM ALCOHOL.

## CAUTION.

*Copy of a Letter received by the Consignees from Edmund Sturge, Esq., London, England.*

Whereas the great popularity which has been attained by the Montserrat Lime Fruit Juice grown on the estates of the Montserrat Company in the West Indies, of which Evans, Sons & Company, Liverpool, are the Sole Consignees, has led unprincipled persons to endeavour to use the name of our family in connection with other and inferior Lime or Lemon Juice which they sell, I think it necessary to state that the whole of the raw Lime Fruit Juice from the estates which were established by me, and are now carried on by the Montserrat Company, is, and has been for the last twelve years, consigned to Evans, Sons & Co., of Liverpool.

London, April, 1883.

(Signed) EDMUND STURGE.

The word "MONTSERRAT" is also Registered.

SOLE CONSIGNEES OF THE MONTSERRAT COMPANY—

**EVANS, SONS & CO., LIVERPOOL; EVANS, LESCHER & WEBB, LONDON;**  
**H. SUGDEN EVANS & CO., Montreal, Canada, and Boston, U.S.A.**



# HORSE, CATTLE, AND SHEEP MEDICINES.



By Special Warrant,  
Dated 27th December, 1865.

BY ROYAL APPOINTMENT.

## DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant,  
Dated 10th February, 1866.

## "ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS,

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for 50 years by Royalty, and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

"CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.

"GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.

"RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.

"RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.

"BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.

"GASEODYNE," for Heaving and Paining, "GARMINATIVE CHALK," &c.

Price of Chest, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS OF THE BRITISH ISLES.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, 1871; President's Medal, Spalding, 1872; Silver Medal, Manchester and Salford Show, 1874; Silver Medal, Preston, 1875; Silver Medal, Northamptonshire Agricultural Society, Stamford, 1875; Silver Medal, Crewe, 1875; Special Prize, National Agricultural Society of Victoria, Australia, 1875; Medal, Chester, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Newcastle-on-Tyne, 1877; Silver Medal, Knutsford, 1878; Medal, North Berwick, 1878; Medal, Dairy Show, London, 1878; Silver Medal, Derby, 1879; Silver Medal, Wellington, 1879; Medal, Bentham, 1880; Medal, Melbourne Exhibition, 1880; Silver Medal, Stourbridge, 1881; Silver Medal, Doncaster, 1882; Gold Medal, Christchurch, New Zealand, 1882; and Silver Medal, Canterbury, 1882.

CAUTION.—Beware of Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.

And sold by Messrs. Burgoyne, Burdidges & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, Hovenden & Sons, and all Wholesale Druggists, in London; Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

## HORSES.—LIEUT. JAMES' BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).



THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—

1 oz. pots from	14/- per doz. to	12/6 per doz.	1 lb. pots from	£4 4 0 per doz. to	£4 0 0
2 "	£1 5 6 "	£1 3 0 "	1 "	7 16 0 "	7 10 0
4 "	2 8 0 "	2 4 0 "			

Observe the Trade Mark.—"A Horse's Head on the top of each Pot, and the signature, R. J. James."

Wholesale Agents, BUTLER & CRISPE, 4 Cheapside; NEWBURY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & Co., Dublin; GOULDING, Cork; FOGGITT, Thirsk; and SANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to

R. J. JAMES, South Retford, Notts.

JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.



## VESICO SUDORIFIC.

VESICO SUDORIFIC (Registered) will not bluish, but will, quicker than any other remedy, relieve and cure Splint, Spavin, Ringbone, Sidebone, Capped Hock, Curb, Windgall, and strengthen the legs of Horses. Also for Tumours in Cattle. Price 2s. 6d. and 5s. of Chemists; or post free, 2s. 9d. and 5s. of the Proprietor,

C. W. GREGORY, V.S., BRISTOL.

Wholesale Agents:—London—BARCLAY & SONS, EDWARDS & SON, SANGER & SONS; Edinburgh—RAIMES & Co.; Dublin—BOYD & GOODWIN; Cork—W. & H. M. GOULDING.

## RAT POISON.

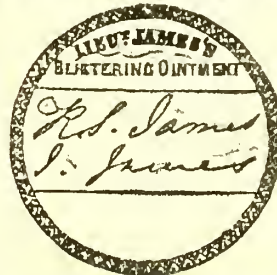
"Among many preparations for killing Rats I have never found anything answer so well as that I obtained from

Messrs. SANFORD & SON, of Sandy, Bedfordshire.

From One Dressing I found 120 dead rats."—G. WINTER, Park Farm, Walden, Essex.

The Poison can be obtained in Boxes, at 1s.; 1s. 2d. with Postage, and upwards. A Liberal Discount to Agents.

## ESTABLISHED 1833. HORSES.—LIEUT. JAMES' BLISTER.



### CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, Liverpool, and York, are now and have been Agents 45 years.

AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 167 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burdidges & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; W. Mather, Farringdon Road, London, and Manchester; R. Hovenden & Sons, 93 & 95 City Road, Finsbury; Sanger & Son, 160 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia Street, Glasgow; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delacre, Pharmacie Anglaise, Bruxelles. And by all Chemists, in Pots, 1/6, 2/9, and 5/1.

COLONIAL AGENTS:—MELBOURNE AND WELLINGTON: Felton, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNEDIN AND AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

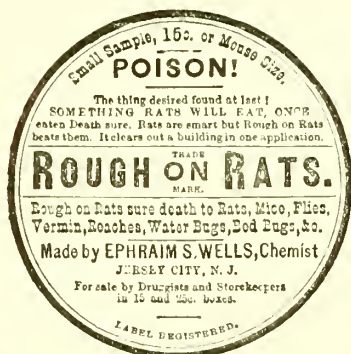
W. H. JAMES, Sole Manufacturer, STANFORD, FARRINGTON, BERKS. Advertised in "Bell's Life" 49 years. Beware of Spurious Imitations.



Clears out Rats, Mice,  
Roaches, Flies, Ants, Mosquitoes,



Bed-Bugs, Insects, Skunk, Weasel,  
Beetles, and all Vermin.

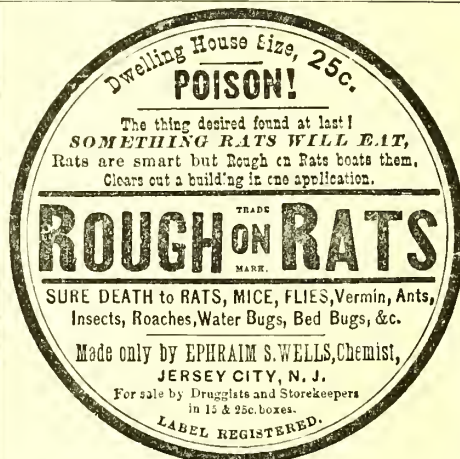


7½d.; 4s. 3d. doz.

LOOK OUT  
For Imitations.

SEND FOR  
Advertising Matter—  
your Name on.

BUY OF  
Your Wholesale  
Druggist.



1s.; 6s. 5d. doz.

No loss by breakage,  
leakage, or evaporation.

Will keep a thousand  
years in any climate.

No Grease to soil the  
drawers or other goods.

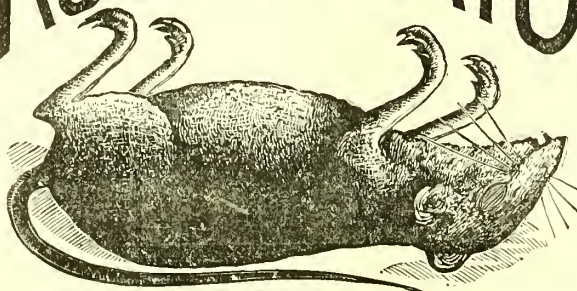
Used for Insects, Bugs,  
&c., as well as for Rats  
and Mice.

Always does the work.

Lowest price of its  
kind.

Pays better than any  
other.

ADVANTAGES OF  
**ROUGH ON RATS**



CAREFUL  
DRUGGISTS,

Who do not sell arsenic  
and strychnine indis-  
criminately, and yet do  
not wish to incur dis-  
pleasure of Patrons by  
absolute refusal, can offer  
7½d. boxes of  
"ROUGH ON RATS"  
as a compromise sub-  
stitute.

MAY BE OBTAINED FROM THE PROPRIETOR,

**E. S. WELLS, Jersey City, New Jersey, U.S.A.;**

And all Wholesale Druggists and Drug Sundrymen throughout Great Britain.



By Appointment to H.R.H.

**BIGG'S**

the late Prince Consort.

**SHEEP AND LAMB DIPPING COMPOSITION,***For Destruction of Ticks, Lice, &c., and Prevention of Fly.***HAS NOW BEEN USED WITH GREATEST SUCCESS FOR NEARLY HALF A CENTURY.**

PAMPHLETS ON APPLICATION.

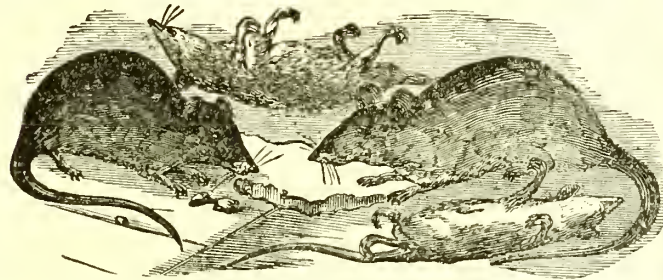
**LEICESTER HOUSE, GREAT DOVER ST., BOROUGH, LONDON.**

In any Town where no Agent exists Chemists are requested to apply.

WHOLESALE AGENTS FOR CANADA AND UNITED STATES—

**Sugden Evans & Co., Montreal, Canada, and Rouse's Point, New York.****BATTLE'S VERMIN KILLER.**

{ Mice eat it readily, and Die on the spot.



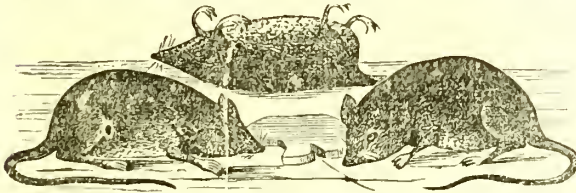
Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

**TESTIMONIALS.—Thousands might be published.**

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

**Mr. J. R. BATTLE, Chemist, Lincoln, England.***No Chemist or Storekeeper should be without a supply.***E. B. TAYLOR'S INFALLIBLE VERMIN KILLER.**

The Rev. Mr. Lewis (late Pastor of St. Stephen's Church, Rochdale) says that a small packet of the Destroyer cleared his house of Mice in a very short time.

Prepared by E. B. TAYLOR, Operative Chemist, 7 Whitworth Road, Rochdale.

Sold in Packets, 2d., 3d., 6d., and 1/- each, by all Chemists.

AGENTS WANTED EVERYWHERE.

**STEINER'S VERMIN PASTE,**

For destroying Rats, Cockroaches, &amp;c.

3d., 6d., and 1s. Glass Jars; 2s. 6d. Tins.

*Warranted to keep for Export.***STEINER'S VERMIN KILLER (POWDER),**

FOR DESTROYING MICE.

1d., 3d., 6d., and 1s. Packets.

**STEINER'S PRIME DALMATIAN INSECT POWDER.**

The most energetic Insecticide. Kills Bugs, Fleas, and all offensive Insects.

Quite harmless to Domestic Animals.

1d., 3d., 6d., and 1s. Tins.

Also in 7-lb. Tins and in Kegs of 120 lbs., as imported.

**STEINER & CO.**

ARE SOLE PROPRIETORS AND MANUFACTURERS OF

**T. JAMES' SUPERIOR PHOSPHOR PASTE.**

1d., 3d., 6d., and 1s. Glass Jars.

*May be obtained through all the Wholesale Houses,*

OR DIRECT FROM

**THE WORKS, HENRY ST., LIMEHOUSE, LONDON.****INDEX TO ADVERTISEMENTS,**

SEE PAGES 39-40.

**100 Rats destroyed for a Shilling by BARBER'S PHOSPHOR PASTE.**

WRAPPED NEATLY FOR THE COUNTER.

Handsome attractive Posters supplied; if conspicuously placed will command constant sale.

Kills Rats, Beetles, &c.  
THE DEAD VERMIN  
DRY UP  
WITHOUT SMELL.



Guaranteed the best  
destroying Paste in  
the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also

**BARBER'S VERMIN KILLER.**

SOLD THROUGHOUT THE WORLD.

Kills Mice upon the spot. In packets, 3d., 6d., and 1s.

Be not deceived with worthless imitations. Observe the Name!!!

**CORNS! CORNS!! BUNIONS!!!**

Are always Cured by the use of

**BARBER'S CORN AND BUNION PLASTERS.**

They never fail in giving relief in 10 minutes. Testimonials accompany each Box. Will well repay anyone to introduce.

8s. 6d. and 21s. per dozen, remittance with order, free per post.

**WORKS, SALISBURY. ESTABLISHED 1848.**

Special Quotations to Shippers. Supplied by all the London Wholesale Houses.

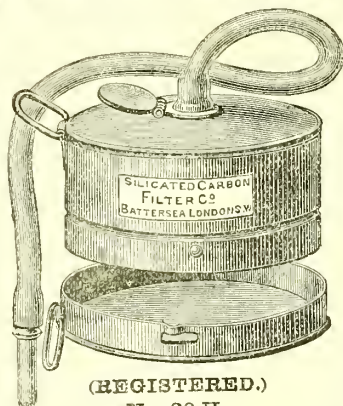


# SILICATED CARBON POCKET FILTER,

IN GERMAN SILVER, NICKEL-PLATED.

**Retailed at FIVE SHILLINGS each.**

Designed by  
MAJOR FRASER,  
of the  
ROYAL ENGINEERS,  
especially  
for Officers' Kits.  
Weights only 8 ounces.



(REGISTERED.)  
No. 20 H.

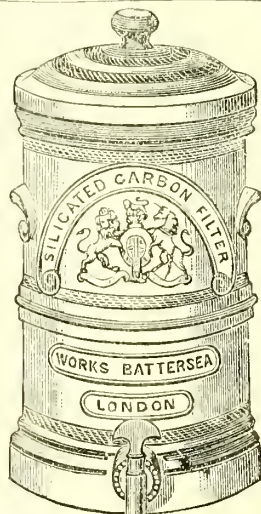
It has been approved  
by the  
Authorities at the  
Horse Guards, and has  
been largely used  
in the Afghan, Zulu, and  
Egyptian Expeditions.

Sample sent free by Post on receipt of **FOUR SHILLINGS.**

## DOMESTIC

Made in cream-coloured Stone-ware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.

All sizes of this pattern can now be had with Ice Compartment, which renders this Filter the most perfect of Refrigerators.



## FILTER, NO. 27.

### PRICES.

With Ice Compartment.

No. O, capacity $\frac{1}{2}$ gallon	10s. 6d.	
No. A, " 1 "	14s. 6d.	... 17s. 6d.
No. B, " 2 "	21s. 0d.	... 25s. 0d.
No. C, " 4 "	32s. 0d.	... 36s. 0d.
No. D, " 6 "	42s. 0d.	... 48s. 0d.
No. E, " 8 "	52s. 0d.	... 60s. 0d.
No. F, " 12 "	70s. 0d.	... 80s. 0d.

## MAIN SUPPLY FILTER, NO. 40.

SPECIALLY ADAPTED FOR  
Mansions, Schools, Hospitals, Public  
Institutions, Breweries, Distilleries,  
Soda Water Manufactories,  
Dye Works,

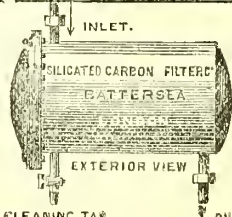
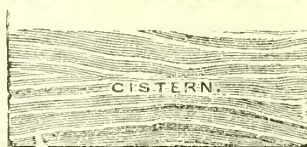
And all other Establishments where large quantities of

### PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows:—

A, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe .. ..	£6 6s.
B, 1-inch pipe .. ..	£9 9s.
C, $1\frac{1}{2}$ -inch, $1\frac{3}{4}$ -inch pipe .. ..	£15 15s.
D, 2-inch pipe .. ..	£26 5s.



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

**Special Contracts entered into  
for Large Works, Institutions,  
&c., &c.,**

**FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.**

*Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.*

**SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.**



# SILICATED CARBON FILTERS.

## SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

They are readily cleaned from sedimentary matter by merely blowing through the tube, and brushing the surface of the filtering medium.

- |   |      |
|---|------|
| A.—Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal box .. .. .   | 2 6  |
| B.—Ditto, 3½ inches diameter, in best stoneware .. .. .   | 5 0  |
| Ditto, " " with silver-plated tap .. .. .   | 7 0  |
| C.—Emigrant's, 5 inches diameter, with silver-plated tap .. .. .  | 12 0 |
| G.—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and Zululand, and to the Ashantee and Egyptian Expeditions .. .. . | 3 6  |
| H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits .. .. .                       | 5 0  |

## TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

### PRICES.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.  
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

## POROUS TERRA COTTA FILTER, NO. 29

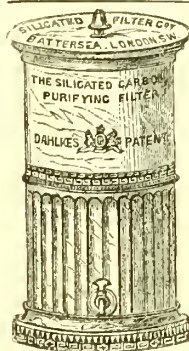
Shape of this Filter as Fig. No. 24.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.

## SILICATED CARBON BLOCKS.

2 in., 1s. 6d.; 2½ in., 2s. 6d.; 2¾ in., 3s.; 3½ in., 4s.; 4¾ in., 5s. 6d. ea.

SPECIAL QUOTATIONS FOR QUANTITIES.



## DINING-ROOM FILTER, No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

### PRICES.

- |                                |       |
|--------------------------------|-------|
| A .. .. .                      | 35s.  |
| B .. .. .                      | 80s.  |
| A, with Ice Compartment.. .. . | 42s.  |
| (New Patent.)                  |       |
| B, with Ice Compartment.. .. . | 100s. |
| (New Patent.)                  |       |

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

## REFRIGERATOR FILTER, NO. 25.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A

COOL DRAUGHT OF PURE WATER.

- |   |          |
|---|----------|
| Price, with Silver-plated Tap .. .. .     | 31s. 6d. |
| Ditto, ditto, with Ice Compartment.. .. . | 42s. 0d. |
| Capacity Two Gallons.                     |          |

Specially adapted for Tropical Climates.



# SILICATED CARBON (Regd.) ASCENSION FILTERS.

The most efficient known Filter

### PRICES:

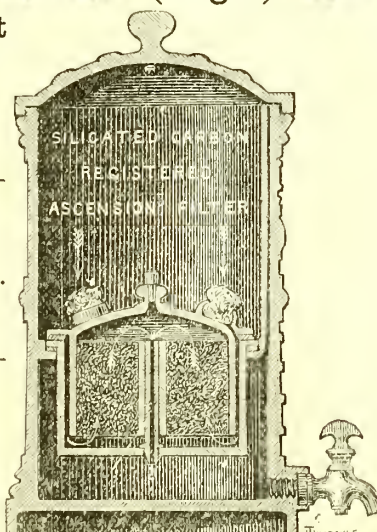
No. 38.

- |                 |
|-----------------|
| 1 Pint, 2/6 ea. |
| 2 " 4/-         |
| 3 " 5/6         |

The Water passes upwards through the Silicated Carbon in the direction shown by the Arrows in the Drawings.



NO. 38.



NO. 37.

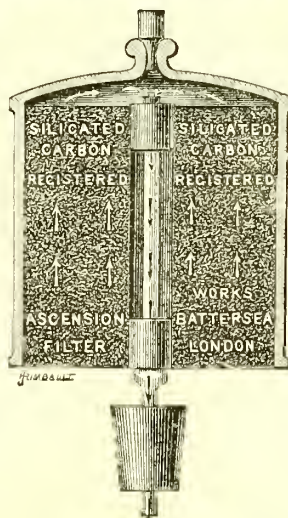
for Table and Domestic Use.

### PRICES:

No. 37.

- |                  |
|------------------|
| 1 Gal., 18/- ea. |
| 2 " 28/-         |
| 4 " 38/-         |

The inner blocks being movable, by attaching an india-rubber tube they can be converted into Pocket or Travelling Filters.



SECTION OF NO. 38.

WRITE FOR FULL LISTS TO THE

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.



# THE MORGAN CRUCIBLE COMPANY

(THE PATENT PLUMBAGO CRUCIBLE COMPANY),

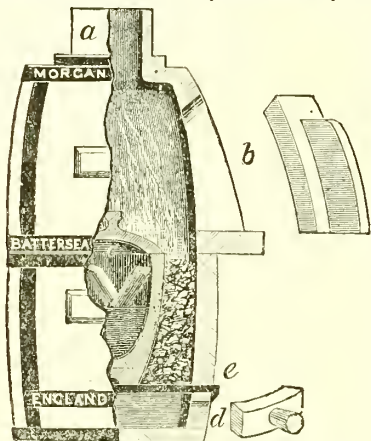
Sole Manufacturers of MORGAN'S and SALAMANDER CRUCIBLES.

## PORTABLE FURNACES.

IRON BOUND. EXTERIOR DIMENSIONS.

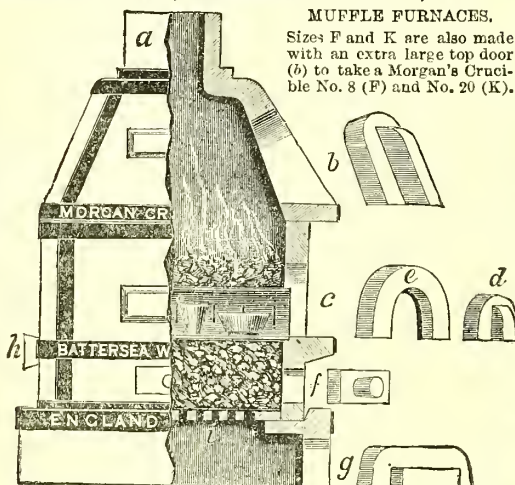
For MELTING GOLD, SILVER, COPPER, &amp;c.

For ASSAYING, DENTAL WORK, &amp;c.



a. Door for fuel.  
b. Door for muffle.  
c. Door for regulating draft.  
d. Door for regulating draft.  
e. Fire-clay grate.  
f. Socket on which to fix iron chimney.

No.	Diam. in.	Diam. milli.	Height, in.	Hauteur, milli.	For Morgan's Crucible.	Price, £ s. d.
A	9½	235	17½	445	No. 2	1 0 0
B	9½	248	20	508	" 4	1 5 0
C	11	280	22	559	" 6	1 10 0
D	13½	349	26	660	" 8	2 5 0
E	14½	369	28	712	" 12	3 0 0
F	18	457	32	813	" 16	4 0 0



MUFFLE FURNACES.

Sizes F and K are also made with an extra large top door (b) to take a Morgan's Crucible No. 8 (F) and No. 20 (K).

a. Door for fuel.  
b. Door for muffle.  
c. Door for regulating draft.  
d. Door for regulating draft.  
e. Fire-clay grate.  
f. Socket on which to fix iron chimney.

No.	Diam. in.	Diam. milli.	Height, in.	Hauteur, milli.	Furnace.
A	12½	318	24½	622	2 0 0
B	12½	337	25½	642	2 5 0
C	14½	369	27½	686	2 10 0
D	15½	394	28½	724	3 0 0
E	16½	414	29½	749	3 10 0
F	17½	445	30	762	4 0 0
K	23	585	48	1224	8 0 0



### MUFFLES.

With or without apertures.

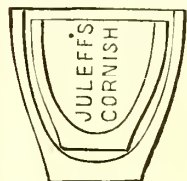


No.	Long, in.	Wide, in.	High, in.	Price, per doz.	No.	Long, in.	Wide, in.	High, in.	Price, per doz.
A	7	3½	2½	12/	G	11	4	3½	21/
B	7½	4½	2½	15/	H	10½	5½	3½	25/
C	8	4½	3	18/	J	12	6	4	33/
D	8½	5	3½	21/	K	14	8	5	48/
E	9	5½	3½	24/	L	15	9	6	54/
F	10	6	4	27/					

Sizes A to F, also K, are suited for the Furnaces of the same letters.

G to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &amp;c.



## ASSAY CRUCIBLES.

### FOR COPPER.

CORNISH FORM AND QUALITY (JULEFF).

Nest of Two	High, in.	Hauteur, milli.	Diam. in.	Diam. milli.	Price, per doz.
1	3½	883	3	977	2/ per doz.
Single	3½	864	2½	951	1/

All sizes and shapes to order.

### FOR TIN.

High, in.	Hauteur, milli.	Diam. in.	Diam. milli.	Price, per doz.
3½	883	3	977	6/ per doz.

Covers, 1s. 6d. per doz.

### FOR LEAD.

3 in. diam., .077 diam. milli., with Covers, 2/3 per dozen.  
Other sizes to order.

### FOR GOLD.

THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

No.	Diam. in.	Diam. milli.	Height, in.	Hauteur, milli.	Per doz.
A	1½	387	1½	927	2/
B	1½	382	1½	932	2/
C	1½	388	1½	938	2/
D	1½	445	2	1051	2/

Covers for either size, 6d. per doz.



## POROUS BATTERY CELLS

OF SUPERIOR QUALITY.



FLAT, WITH EARS.



ROUND.

LIST OF PRICES ON APPLICATION.



FLAT.

NOTICE.—Care should be taken in all instances, when ordering, to specify the Crucibles, &amp;c., manufactured by

THE MORGAN CRUCIBLE CO. (Sole Manufacturers of Morgan's and Salamander Crucibles), Battersea Works, LONDON, S.W.

Sole Manufacturers of JULEFF'S Cornish Crucibles for Copper, Tin, &amp;c.



The BEST PACKET TEA, without exception, is the  
**“KAISAR-I-HIND”**

OR  
 EMPRESS OF INDIA

**TEA.**

It is a blend of the choicest growths of India and China, selected specially for their strength, richness, and flavour.



Registered Trade Mark.

AGENT'S OWN NAME AND ADDRESS PRINTED ON EACH PACKET.

*The following Testimonial is one among many instances of the success attending the introduction of this Tea:*

DEAR SIR,

NEWTON ABBOT, May 6th, 1883.

I am pleased to inform you that the “KAISAR-I-HIND TEAS” are giving GREAT SATISFACTION TO MY CUSTOMERS. I had previously acted as Agent for other Packet Teas, but my sales were limited. If you keep up present quality you are certainly entitled to call it as you do: “THE BEST PACKET TEA IN THE WORLD.” Below is a statement of my orders since becoming your Agent, which I think speaks more eloquently than recommendations.

I am, dear Sir, yours truly,

A. CHRISTIE.

Since I undertook the Agency for Kaisar-i-Hind Teas, my orders have been as follows:—

1883.				1883.			
January 3rd	...	First order	...	50 lbs.	March 6th	...	Repeat ...
„ 15th	...	Repeat	...	100 „	„ 26th	...	Do. ...
Febry. 6th	...	Do.	...	170 „	April 16th	...	Do. ...
„ 20th	...	Do.	...	136 „	May 4th	...	Do. ...

P.S.—This is my reply to Grocers for cutting down Patent Medicines. All Chemists should follow my example, instead of repining about the state of trade.—A.C.

Apply for Terms of Agency, &c., to

**THE “KAISAR-I-HIND” TEA COMPANY,**  
**4 GEORGE STREET, TRINITY SQUARE, LONDON, E.C.**



# MAWER'S TARAXACUM COFFEE,

PREPARED BY AN IMPROVED PROCESS BY WHICH THE VIRTUES OF THE  
TARAXACUM OR DANDELION ROOT ARE RETAINED IN A HIGH DEGREE.

In Tins, 6d., 9d., 1/0, and 1/6

Is by far the best in the market. Excellent in quality, neatly packed, cheap and economical, and a very saleable article.

A LARGE BUYER writes:—"Our customers ask for Mawer's Taraxacum, and will have no other, and we are doing well with it."

A NOBLE EARL, the oldest in the House of Peers, sends the following message:—"Present my compliments to Messrs. Mawer, and tell them I like their Taraxacum, and it agrees with me very well; and request them to send the usual number of tins."

LONDON AGENTS.

HANSON, SON, EVISON, &  
BARTER.

BARCLAY & SONS,  
EDWARDS & SON.



## BEWARE OF IMITATIONS.

**MAWER'S TARAXACUM COFFEE.**—*Testimonial.*—"Lady Charlotte Hobart-Hampden has bought Mr. Mawer's Taraxacum Coffee for years, and is able to say that it is much preferred here to the other kinds of Coffee, and that it is found more economical.—Hampden House, Bucks."

**IMPORTANT MEDICAL TESTIMONY.**—"I believe Mawer's Taraxacum Coffee to be a very useful preparation for persons suffering with weakly stomachs or sluggish and inactive livers. It is light, and easily digested, and forms a pleasant and palatable beverage for breakfast or supper."

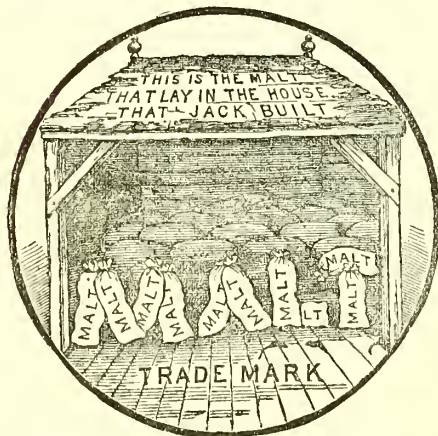
HENRY R. RUCKLEY,  
L.R.C.S.I., L.R.C.P.E., &c., &c

See Analytical Report by Professor  
ATTFIELD, F.R.S., &c., Professor of Practical  
Chemistry to the Pharmaceutical  
Society of Great Britain, on every tin.

Handbills, &c., sent on application to

MAWER. EMERY & CO., LEIGHTON BUZZARD.

# CONROY'S MALT COFFEE.



Conroy's Malt Coffee has received the following Certificates amongst many others.

"Undoubtedly a nourishing and health producing article of diet."—Edward Davies, F.C.S., F.I.C., &c., Liverpool.

"Most beneficial in cases of atonic indigestion."—E. Adam, M.R.C.S., England.

"Genuine Coffee gives me indigestion. Your Malt Coffee is entirely free from this objection."—S. Whitaker, Waterfoot, near Manchester.

"Dyspeptics who could never take the ordinary coffee or date coffee can take the Malt Coffee, and with the most beneficial effects."—Dr. Lloyd, Bangor.

"I have frequently recommended your Malt Coffee in cases of weak digestion, invariably with satisfactory results."—W.B.D. Senior Surgeon to the Convalescent Institution, New Brighton.

"A most excellent combination."—A. W. Postans, F.C.S., London.

"Very palatable and marvellously easy of digestion."—Society, October 21, 1882.

"It can in many cases be readily taken when ordinary coffee disagrees."—British Medical Journal, July 29, 1882.

"Refreshing, and at the same time nutritious, spirit-infusing, yet absolutely non-intoxicating, palatable and wholesome to an eminent degree."—The Colonies and India, 29th Sept, 1882.

"Both pleasing to drink, and adds greatly to digestion."—The Anti-Adulteration Review, October, 1882.

"The combination ought, therefore, to improve the health of those who consume it."—Globe.

"Malt Coffee, the new temperance beverage, would seem to make the nearest approach to what is required. Pure malt is in its own way as beneficial as pure coffee, being especially strengthening and nutritious."—Morning Post.

IT IS MADE IN THE SAME WAY AS ORDINARY COFFEE.

Pamphlets containing Testimonials from Eminent Scientific, Medical, and other Gentlemen of the highest position, may be had Free for Gratuitous Distribution.

In cases of 56lbs. each, put up only in 11b. and 1/2lb. tins. Each Tin is protected by an Excise Stamp under the Regulations of the new Inland Revenue Bill of August 3, 1882.

PREPARED ONLY AT THE

MALT COFFEE WORKS, 34 FLEET STREET, LIVERPOOL.

SOLE PROPRIETORS—

EVANS, SONS & CO., 56 Hanover Street, LIVERPOOL.

EVANS, LESCHER & WEBB, 60 Bartholomew Close, LONDON, E.C.

QUOTATIONS ON APPLICATION.



SEVEN PRIZE MEDALS AWARDED.

## GOODALL'S HOUSEHOLD SPECIALITIES. YORKSHIRE RELISH.

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate and name, GOODALL, BACKHOUSE & CO. No other is genuine.

## Goodall's Baking Powder

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

## Goodall's Quinine Wine

The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. In Bottles, 1s. 1½d. and 3s. 3d. each.

## Goodall's Custard Powder

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in Boxes 6d. and 1s. each.

## Goodall's Ginger Beer Powder

Makes Three Gallons of the Best Ginger Beer in the World for 3d. Is a delicious and invigorating beverage, possessing valuable medicinal properties. It is cooling in its nature, and a most wholesome beverage for both winter and summer. Sold in Packets, 3d. and 6d. each.

## Goodall's Blanc Mange Powder

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blanc-mange may be produced in a few minutes at a trifling cost, and may be had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6d. and 1s. each.

## Goodall's Egg Powder

Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One penny packet will go as far as four eggs; and one sixpenny tin as far as twenty-eight. In 1d. Packets; 6d. and 1s. Tins.

SOLE MANUFACTURERS—

GOODALL, BACKHOUSE &amp; CO., White Horse Street, Leeds.

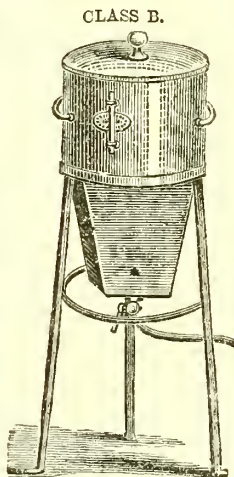
A Monthly Price List of Druggists' Sundries, Patent Medicines, &c., can be had post free on application.



## MAIGNEN'S PATENT FILTRE RAPIDE.

For the clarification of all liquids, hot or cold,  
in large or small quantities.

BIJOU CLASS.



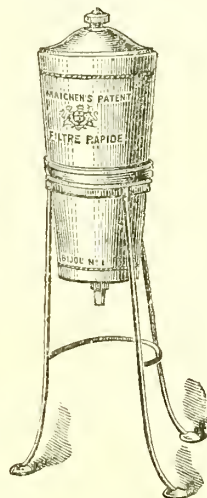
CLASS B.

Class B.  
Tinned Iron,  
Tinned Cop-  
per. Price  
from 25/.

Bijou A & C  
Class.

Stoneware,  
from 12/6.

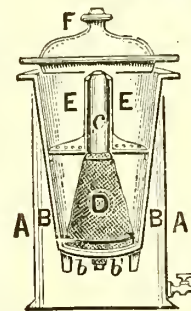
Class E.  
Earthenware  
and Wood,  
from 30/.



Particularly suitable for the clarification of spirituous preparations, syrups, tinctures, medicated wines, decoctions, infusions, essential oils, essences, jellies, juices, &c., &c.

MAIGNEN'S FILTERING PAPER, used with these Filters, is the best on the market. Price 18s. per ream. Send 1s. for a sample quire.

## MAIGNEN'S PATENT "FILTRE RAPIDE" FOR WATER.



Section of "Cottage"  
and "Bijou D" Filtré  
Rapide for Water.

These WATER Filters are entirely different from all other filters hitherto brought before the public.

They render the water filtered absolutely pure, and they can be easily and thoroughly cleansed by the users themselves.

They have been awarded the only medal ever given by the Sanitary Institute of Great Britain for filters, and have had the highest award at every exhibition at which they have been shown.



"BIJOU" D.  
For Water.

Filtering medium, Maignen's Patent Carbo Calcis.

Prices and particulars of larger Filters from the Patentee,

**P. A. MAIGNEN,**  
22 & 23 Great Tower Street,  
LONDON.



# KREOCHYLE BARFF AND WIRE. LIQUID MEAT.

## SPECIALTY FOR INVALIDS.

To be obtained of Messrs. BARCLAY & SON, Farringdon Street, Messrs. ROUSE & CO., Wigmore Street, Messrs. BURGOYNE, BURBIDGES & CO., Coleman Street, Messrs. NEWBERRY & SON, King Edward Street, of all principal Chemists, and of "THE KREOCHYLE COMPANY," BIRKBECK ROAD, LEYTONSTONE, E.

Prices—Retail, 5s. per pint; 2s. 9d. per half pint; 1s. 6d. per quarter pint.

**E. LAZENBY & SON** (6 EDWARDS STREET, PORTMAN SQUARE.) Sole Proprietors of the Celebrated Receipts and Manufacturers of the Pickles, Sauces and Condiments so long and favourably distinguished by their name, beg to remind the public that their labels are affixed to the choicest description of goods only, that every article prepared by them is guaranteed as entirely unadulterated and may be obtained of Grocers, Italian Warehousemen and others.

**HARVEY'S SAUCE.**—CAUTION.—The admirers of this Celebrated Sauce are particularly requested to observe that each bottle bears the well-known label signed "ELIZABETH LAZENBY"; this label is protected by perpetual injunction in Chancery of the 9th July 1858 and without it none can be genuine.

18 TRINITY STREET, LONDON. S.E.

*Elizabeth Lazenby*

# "RAMORNIE." LIEBIG'S EXTRACT OF MEAT.

## REDUCED PRICES!!!

7-lb. Tins .....	per lb.	5/11	each ....	41/5
1-lb. Jars .....	"	6/2	per doz.	74/0
1-lb. Jars .....	"	8/4	"	38/0
4-oz. Jars .....	"	6/7	"	19/9
2-oz. Jars .....	"	7/0	"	10/6
1-oz. Jars .....	"	7/8	"	5/9

Write for Detailed Price List to the Australian Meat Co., 9 & 11 Fenchurch Avenue, E.C.

10 lbs. Carriage Free.

**SPECIAL NOTICE & CAUTION.**

**BRAND & CO.**

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

**NOT REMOVED**

From their **SOLE ADDRESS**, No. 11  
LITTLE STANHOPE STREET, MAY-  
FAIR, W, and caution the trade to

**BEWARE of IMITATIONS.**



# NELSON'S EXTRACT OF MEAT.

CHEAPEST IN THE WORLD.—HALF THE PRICE OF LIEBIG.

**OUNCE PACKETS, 4d. EACH.**



FIRST CLASS MEDAL, NEW ZEALAND, 1882.

# PHILLIPS & SONS' DANDELION COFFEE.

Castle Square, SWANSEA; 12 Arthur Street West, LONDON BRIDGE.

*Be particular in noting London Address, as we have no connection with a Retail Firm of same name.*

# FRY'S MALTED COCOA

(PATENTED).

A Combination of FRY'S Pure COCOA EXTRACT with  
**ALLEN & HANBURYS' CONCENTRATED EXTRACT OF MALT**

J. S. FRY &amp; SONS, BRISTOL AND LONDON.

## CHEMISTS' TEA AGENCY.

### WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

### WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

### WALKER & DALRYMPLE'S TEAS.—

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and  
 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

## THE WELL-KNOWN "LONDON TEAS"

ARE ONLY SUPPLIED WHOLESALE BY

## THE GREAT TOWER ST. TEA CO. (LIMITED).

Siftings from Fine Tea	for Retail at 1/4 per lb.
The London Whole-Leaf Tea	1/8 "
The London Broken Tea	1/8 "
The London Two-Shilling Tea	2/- "
The London Two-Shilling Indian Tea	2/- "
The London Assam Broken Tea	2/8 "

AND OTHER FINER BLENDS.

Order a small Sample Parcel. The Quality never deteriorates.

A. HORATIO JONES, Managing Director.

The Great Tower Street Tea Co. (Limited), 39 Great  
 Tower Street, London, E.C.

## PURE SOLUBLE COCOA.

### VAN HOUTEN'S COCOA

Is the only guaranteed Pure Soluble Cocoa, better and cheaper than any other Cocoa, Cocoa Extract, or any Chocolate.

The *British Medical Journal*, March 27, 1869, says:—"Van Houten's Cocoa is admirable. In flavour it is perfect, and it is so pure, well prepared, and rich in alkaloid," &c., &c. See also the *Lancet*, &c.

Sold (full weight) in 1-lb., 1/2-lb., and 1/4-lb. Tins, at 4s., 2s. 1d., and 1s. 1d. Sample Tins, sufficient for a family, free of charge, through your Grocer or Chemist, or from

THE CHIEF DEPOT, 6 &amp; 7 COLEMAN STREET, LONDON, E.C.

## TEA AGENCY.

Trade Mark, "FATHER TIME", Registered.

### HENRY ROUS'S Packet and Loose Tea.

Agents appointed where unrepresented throughout the United Kingdom Samples and Prospectus post free. Bankers, the National Provincial Bank of England.—Warehouses, 376 to 378 Edgware Road, London, W.

## KANGRA VALLEY

## Indian Tea Growers' Association,

7 NEW COVENTRY STREET,

LEICESTER SQUARE, W.

## PROSPECTUS.

The object of the Planters who have formed this Association, is to establish a business for the direct supply of Tea from the Plantations of the Kangra Valley to the public.

So great a success has attended the efforts of the promoters of the Association that it has become necessary that one of the Planters should reside in England to manage its affairs.

The distinctive feature of the business of this Association is that the Tea is delivered to consumers in the original One Pound tin-foil lined parcels in which it is packed in the Valley, and it is guaranteed to be absolutely pure.

The Association hopes that it may, without presumption, safely recommend this Tea to the public, believing that it will continue to give the greatest satisfaction.

*Vide Allen's Indian Mail*, Feb. 28, 1883:—"... We can speak from actual knowledge of the excellence of the Teas of the 'Kangra Valley Indian Tea Growers' Association,' and as in advertising them we are also benefiting those who take advantage of their enterprise, we append their modest prospectus, which promises no more than they are well able to perform."

These Teas, retailing respectively at 4/, 3/, and 2/6, can be purchased in any quantity, either direct from the Store, 7 New Coventry Street, or from Messrs. Barclay & Sons, 95 Farringdon Street, Agents to the Association.

Special Terms granted to all Chemists and Druggists, to whom the Teas, on account of their absolute purity, are particularly recommended.

**PHILLIPS & CO.,**

IMPORTERS OF

**TEAS, COFFEES, AND MANUFACTURERS OF PURE, PLAIN, AND FANCY  
COCOAS AND CHOCOLATES,****8 King William Street, City, London, E.C.**Warehouse and Show Rooms in adjacent premises, 13 and 14 ABCHURCH LANE, and at 10 and 11 GRAND  
HOTEL BUILDINGS, CHARING CROSS.*The Agency for the Sale of PHILLIPS & CO.'S Teas and Coffees, Cocoas and Chocolates, will be found very profitable to Chemists.*

TRADE MARK.

**R. J. FULLWOOD & CO.,***The Original Inventors of the Prime, Rich, Golden-colour Cake and Fluid Extract of***ANNATTO.**

TO BE HAD GENUINE ONLY FROM THE STEAM ANNATTO WORKS,

**31 BEVENDEN STREET (late 24 Somerset Place), HOXTON, LONDON.—Established 1785.**

THE CELEBRATED CAMBRIAN MEDICINE.

**JONES' (TREMADOC) APERIENT AND ANTIBILIOUS PILLS.**

The general test of HALF A CENTURY has now established the reputation of these PILLS, composed of rare and expensive Vegetable preparations, combined with a valuable SNOWDONIAN HERB, forming a MILD, LAXATIVE, TONIC REMEDY, superior to all other preparations as a PREVENTIVE AND CURE FOR ALL DISEASES RESULTING FROM A DISORDERED STATE OF THE STOMACH AND LIVER AND IMPURITY OF BLOOD, &c.

Sold by all the Wholesale Houses, and at the Depot, Tremadoc, North Wales. Retail by all Medicine Vendors in every Town in the United Kingdom and the Continent, in Boxes, at 1s. 1½d., 2s. 6d., and 4s. 6d. each.

**Original Plaster Works.**

ESTABLISHED OVER 60 YEARS.

**A. De St. Dalmas** } 40 Belgrave Gate, Leicester.  
(Formerly MOOR),**MEDICAL PLAISTERS**

Of all kinds (Best Quality) for HOME and EXPORT. PATENT

**POROUS PLAISTERS**—Yards or Boxes.

Order "St. Dalmas's" through Wholesale Houses. Prices on application.

**FRANCIS'S****BRONCHIAL PROTECTOR**

REGISTERED TRADE MARK.

Is the best preventive and cure of Bronchitis, Asthma, Winter Cough, Tight Breathing, and all Throat Complaints. 1s. 1½d. & 2s. 9d.  
Mr. J. D. Fisher, Chemist, Blackpool, in ordering another supply says—"I have tried it myself, and have received great benefit from it. My customers speak highly of its virtues. Have sold the last, so be prompt, please."

**Manufactured by A. DE ST. DALMAS } Leicester.**  
(Formerly MOOR),**HENRY'S CALCINED MAGNESIA**

Continues to be prepared with scrupulous care in the greatest chemical purity, by

**Messrs. THOMAS & WILLIAM HENRY, 11 East Street, St. Peter's, Manchester,**

And is sold in bottles, authenticated by a Government Stamp bearing their Names and Trade Mark, "Henry's Calcined Magnesia."

**Price 4s. 6d., or 2s. 9d.****NEW YORK—MESSRS. J. & S. FERGUSON, Pine Street. PARIS—MESSRS. ROBERTS & CO., 23 Place Vendôme.**

THE

**"COUNTY CIGARETTE."****BEYNON & STOCKEN,****10 GRACECHURCH STREET, LONDON.**



# NESTLE'S MILK FOOD.

THE

**"PERFECT FOOD FOR INFANTS."**

**NESTLE'S MILK FOOD** is prepared at Vevey, Switzerland, from the pure milk of Alpine-fed cows, the finest wheaten flour and sugar, combined in exact proportions to imitate closely the natural food for infants. It is thoroughly cooked, and reduced to a fine powder, perfectly soluble in water, requires only the simple addition of water to prepare it for use—in this respect having the advantage over all other foods.

**NESTLE'S MILK FOOD** is highly recommended by the best medical authorities in all parts of the globe as a perfect diet. Nestle's is the original and genuine Milk Food or Powder. The extensive demand for this Food, its well-known superiority and universal recognition by the medical profession, has produced the inevitable imitations. The Trade and the Public are hereby cautioned. Nestle's Milk Food has stood the test of years. Take no other under any pretence whatever.



**NESTLE'S MILK FOOD** is put up in Tins, packed in lined cases when ordered specially for the Export Trade. Is highly concentrated, and in a perfectly dry state. Will keep good in any climate.

For exportation the Food is a very desirable article, and is much sought after among people of all nationalities in all parts of the globe. Its advantage as an article for export consists in

**Its uniform quality. Its purity. The simplicity of its preparation for use.**

**Its freshness in warm climates, where cow's milk soon becomes tainted.**

*Foreign and Colonial Importers should obtain their supplies through any Wholesale Firm in Great Britain, or Shipping Agent, thus ensuring fresh stock and lowest prices.*

**LONDON DEPOT: 9 SNOW HILL, E.C.**

**SEVEN INJUNCTIONS** have been granted during the past few months.



**CAUTION! "YORKSHIRE RELISH."**



**NOTICE IS HEREBY GIVEN** that in several actions instituted by Messrs. GOODALL, BACKHOUSE & CO., of LEEDS, Injunctions have been recently granted by Judges of the Chancery Division of the High Court of Judicature, restraining several persons from using several Counterfeits of Messrs. GOODALL, BACKHOUSE & CO.'s Labels, and in particular against the use of the words "YORKSHIRE RELISH." The sole and exclusive right to the use of which words having been finally established by the above Firm, they will take immediate proceedings against parties manufacturing or offering for sale Sauce under the above title, not being of the manufacture of Messrs. GOODALL, BACKHOUSE & Co.

Information may be given to the undersigned,

J. SEYMOUR SALAMAN,

12 KING STREET, CHEAPSIDE, LONDON,

*Solicitor to the Trade Mark Protection Society.*

## SPRATTS PATENT DOG MEDICINES AND SOAP. TASTELESS APERIENT BISCUIT FOR DOGS.

The *Field*, 28th January, 1882, says:—"The satisfactory results we obtained leave no doubt in our mind as to the value of the invention."

**"LOCURIUM"**

(PATENT)

CURES ALL KINDS OF CUTS, BRUISES, AND WOUNDS IN MAN AND ANIMALS.

**"SPRATTS PATENT,"** Bermondsey, S.E., or order through your Wholesale House.

Wholesale Agents for the Soap and Dog Medicines:—Barclay & Sons; Sanger & Sons; Sutton & Co.; F. Newbery & Sons; Lynch & Co.; R. Hovenden & Sons, London; Raimes & Co., Edinburgh, York, and Liverpool; Ravensdale Mill Co., Dublin; Woolley, Sons & Co., Manchester; Taylor, Gibson & Co., Newcastle-on-Tyne; Goodall, Backhouse & Co., Leeds; and of all Wholesale Houses.

# ROBINSON'S ORANGE WINE

(VIN. AURANTII, B.P.)

*Specially prepared for Quinine Wine, does not deposit, will keep good in any Climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.*

## THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

**CONCENTRATED WATERS.**—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopoeia.



	Per lb.		Per lb.		Per lb.		Per lb.
Aqua Anethi, Concent.	4/0	Aqua Cinnam. Ver. Concent.	6/0	Aqua Foeniculi, Concent.	4/0	Aqua Pimentae, Concent.	4/0
" Anisi, "	4/0	" Cassia, "	4/0	" Menth Pip. "	4/0	" Rosae "	8/6
" Camphorae, "	4/0	" Flor. Aurant. "	8/6	" " Ang. Con. "	6/0	" Rosae Virgin. "	10/6
" Carui, "	4/0	" Flor. Sambuci, "	8/6	" " Virid. "	4/0		

The above are put up in Bottles of 1/4 lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over cork.

Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Liverpool; Woolley, Manchester; Bewley & Draper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hatrick & Co., Glasgow; Raimes & Co., Duncan Flockhart & Co., J. Mackay & Co., T. & H. Smith & Co., Edinburgh; Foggett, Thirsk; Goodall & Co., Leeds; J. Richardson & Co., Leicester; Slinger & Son, York; McKesson & Robbins, New York. Special terms for large quantities may be had from

**B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.**

# W. EDWARDS & SON,

157 QUEEN VICTORIA STREET, LONDON,

WHOLESALE AND EXPORT DEALERS IN

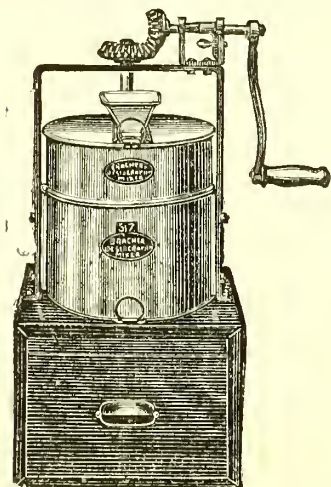
## Patent Medicines and Proprietary Articles,

ENGLISH, AMERICAN, FRENCH, &c.

SOLE AGENTS for ROCHE'S HERBAL EMBROCATION,

Burchell's Anodyne Necklaces, Ford's Balsam of Horehound, Widow Welch's Pills, by Mrs. Smithers, &c., &c.

PRICE LISTS SENT ON APPLICATION. ORDERS CAREFULLY AND PROMPTLY EXECUTED.



## BRACHER'S PATENT "Desideratum" Mixing Machines

Admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby superseding to a great extent the use of the Pestle and Mortar, supplying a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Drysalers, Colour Merchants, and Manufacturers, and are capable of mixing either large or small quantities more quickly than by any other method. They can be worked either *with* or *without* the cover, are easily cleaned, and are, without doubt, the best and cheapest Mixing Machines ever invented; indeed, it would scarcely be thought possible that the articles could be so thoroughly blended in such an incredibly short time.

**MANUFACTORY: 77 HIGH STREET, WINCANTON.**



# Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

## IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,  
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND



ONLY GENUINE.

## FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London	Frazer & Green,	Glasgow	Morson, T., & Son,	London
Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	London
Baiss Brothers,	"	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Itcherds,	Birmingham	Goulding, Messrs.	Cork	Parsons & Richardson,	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	Liverpool
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	York
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Raines, Blanshards & Co.,	Edinburgh
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sang & Barker,	"
Curling & Co.,	"	Hopkins & Williams,	"	Sanger, J., & Sons,	London
Curtis & Co.,	"	Hovenden, R., & Sons,	"	Sim, James, & Co.,	Aberdeen
Davy, M'Murdo & Co.,	"	Hunt & Co.,	Exeter	Smeeton, W.,	Leeds
Dobbin, W., & Co.,	Belfast	Hunt, A., & Co.,	"	Southall & Co.,	Birmingham
Drew, Barron & Co.,	London	Johnson, J. H. & S.,	Liverpool	Sutton, W., & Co.,	London
Drew, R., & Alexander,	"	Langton, W., & Co.,	London	Tomlinson, Hayward & Co.,	Lincoln
Dunn & Company,	"	Lynch & Co.,	"	Treacher, Hodgkinson & Co.,	"
Edwards, W.,	"	Mander, Weaver,	Wolverhampton	Westrap, J. B.,	Kensington
Evans, Gadd & Co.,	Exeter	Marsden & Sons,	London	Westwood & Hopkins,	Lincoln
Evans, Lescher & Evans,	London	Maw & Fon,	"	Woolley, James,	Manchester
Ferris & Co.,	Bristol	Meggison & Co.,	"	Wyleys & Brown,	Coventry
Foulger, S., & Son,	London	Mackay, John, & Co.,	Edinburgh	Yates & Co.,	London

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

Sold in Bottles—1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

SOLE MANUFACTURER,

**J. T. DAVENPORT, Pharmaceutist,**  
33 GREAT RUSSELL STREET, BLOOMSBURY SQUARE, LONDON.

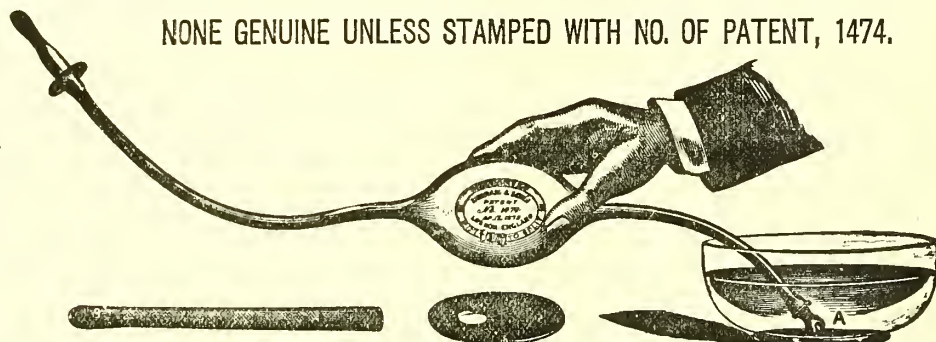
**THE ONLY PERFECT ENEMA OBTAINABLE.**

# INGRAM'S IMPROVED HIGGINSON ENEMA AND SYRINGE APPARATUS

(BY ROYAL LETTERS PATENT).

Made without Seams or Ribs by our Patent Process of dipping in a solution of India Rubber, thus adding great strength and durability.

CAUTION.—The only  
Enema made without  
Ribs.



All Imitations may be  
detected by the Ribs on the  
Surface, and are always  
liable to split.

WARRANTED NOT TO SPLIT.

A.—Metal Pin Valve.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is perfectly smooth on the surface, will not become hard or sticky, will not leak, and will not admit air while injecting or refilling. Specially prepared to resist the heat of tropical countries.

The great superiority of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA over all others has given rise to VARIOUS IMITATIONS, and it has become imperative that the Patentees should, in order to PREVENT DECEPTION, explain the PROCESS OF MANUFACTURE OF THEIR ENEMA and the MODE OF MANUFACTURE OF IMITATIONS thereof, as they have UNDENIABLE PROOF that INFERIOR ENEMAS are positively BEING SOLD as their "ADVERTISED" PATENT SEAMLESS ENEMA.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is made by a NEW PATENT PROCESS, viz. : By repeated dipping in a solution of India Rubber until the required substance is attained. This process adds greatly to its STRENGTH and DURABILITY, and, at the same time, dispenses WITH ALL SEAMS, which, as is well known, are weak points in an Enema. This improved mode of manufacture (the result of long study and experience) enables the Patentees to produce a PERFECT ENEMA WITHOUT SEAMS, thus overcoming the great fault to be found in ALL other Enemas, viz. : SPLITTING AND LEAKING, which has always been a source of trouble.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is fitted with IMPROVED VALVES, which prevent the admission of air with the fluid and CAN at any time BE REPAIRED, if necessary.

**CAUTION.**—Imitations of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA are made of several pieces of Sheet India Rubber, which are cemented together and shaped in a mould, THUS PRODUCING RIBS ON THE SURFACE, and ENEMAS SO MANUFACTURED ARE ALWAYS LIABLE TO SPLIT AND LEAK AT THE SEAMS, AND THUS TO BECOME QUITE USELESS.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA may be distinguished from ALL IMITATIONS by its ENTIRE FREEDOM FROM RIBS OF ANY DESCRIPTION on its surface, and by having an IMPROVED METAL PIN VALVE at the suction end A ; and it is acknowledged to be the ONLY PERFECT ENEMA OBTAINABLE.

Patented in England, No. 1474, April 12, 1878; in France, No. 126,909, October 11, 1878; and in America, No. 212,939, March 4, 1879.

To be obtained of all Surgical Instrument Makers, Druggists' Sundriesmen, Chemists and Druggists, in the three following qualities:—

- No. 1a. Highly Polished, in Red, Green, Blue, Black, or White.
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RECEIVED HIGHEST AWARDS—MEDALS AND DIPLOMAS—OVER  
ALL EUROPEAN AND AMERICAN COMPETITORS.PHILADELPHIA, 1876,  
MELBOURNE, 1880,  
NEW YORK, 1881,PARIS, 1878,  
NEW YORK, 1880,  
ATLANTA, 1881,NEW YORK, 1879,  
MATANZAS, 1881,  
CHARLESTON, 1882.**SEABURY & JOHNSON,**

MANUFACTURERS OF

India Rubber, Medicinal, Adhesive,  
Bunion, Corn, Court,**PLASTERS**Kid, Leather, Mustard, Spread,  
Pharmaceutical and SurgicalOf every description, in the most approved form. Also, Absorbent, Borated, Salicylated and  
Carbolated Cotton, Antiseptic Gauze, Bandages. Cotton Wool, Gutta Percha Tissue,  
Lint, Oil Silk and Muslin, and every variety of Surgical and Antiseptic Dressings.**SPECIALTY:**—Pharmacopœia & Surgical Plasters, in India Rubber Combination, Porous & Spread.

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**EVERY ARTICLE WARRANTED.****Pharmacopœia & Medicinal India  
Rubber Porous Plasters.**

Packed two dozen in a box. Size, 5x7½ inches.

	per gross,	£ s. d.
Aconite.....	3 0 0	
Arnica.....	2 8 0	
Belladonna.....	2 14 0	
Capsicum.....	2 0 0	
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Opium.....	3 12 0	
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Special Formula made to order. A full line of Plain  
Spread and Porous at same rates.**YARD ROLLS****Pharmacopœia & Medicinal Plas-  
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Porous or Plain Spread, size, 7 in. wide by 1 yard long.

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Aconite and Belladonna.....	1 16 0	
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Blister, Cantharidal.....	1 7 6	
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A full line, Plain and Porous.

**BREAST PLASTERS**Belladonna, Lead & Phytolacca Decandra,  
SEPARATELY OR IN COMBINATION.One dozen in a box. 6 & 7 inches in diameter, Porous and  
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PLIABLE AND ANTISEPTIC.

5 yd. rolls, 14 inches wide.....per 5 yd. roll, 5s. 0d.  
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May also be had in Spools, ¼, 1, 2 and 3 inches wide.

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Porous or Plain Spread, on Strong Cotton Cloth.

Yard Rolls, 7 inches wide .....per dozen, 17s. 0d.  
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**On Twilled Linen and Moleskin.****Corn and Bunion Plasters.**

Mead's MEDICATED.....per dozen boxes, 8s. 0d.

Each box contains one dozen Plasters.

Also a full line of Arnicated Corn and Bunion Plasters,  
round, oval and Square, all styles, thick and thin; in Glass  
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40 different styles, elegant and Balsamic.

**Surgeons' Salicylated Isinglass  
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7 inches wide, 1 yard long.....per dozen, £1 2s. 0d.

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Tins, containing 10 leaves.....	per dozen, 10s. 0d.
Envelopes, containing 6 leaves.....	" 6 0
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**Antiseptics and Absorbents.**A most extensive line, comprising Absorbent, Borated,  
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Oil Silk and Muslin, Gutta Percha Tissue; Carbolated, An-  
tiseptic, Eucalyptus and Iodoform Gauze; Roller, Flannel  
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Yours very truly,**SEABURY & JOHNSON, 1 and 2 Australian Avenue, London, E. C.**

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# WRIGHT'S LIQUOR

origin to too slow a current of blood, of which the most typical example is that seen in *Eczema* connected with varicose veins of the leg—but to the same category also many examples of *Pruritis Scroti*, *Labiorum* and *Ani* may be referred—is best relieved by

See **TESTIMONIALS** of **ENTIRE MEDICAL PRESS** and from **LEADING DERMATOLOGISTS**.

The *Practitioner*, of September, 1881, reports a lecture entitled, "Recent Advances in the Therapeutics of Diseases of the Skin," by W. A. JAMIESON, Esq., M.D., &c. The following is an abstract therefrom:—"Itching, which owes its careful flannel bandages, well applied suspensory bandages, and laxative salts or mineral waters, which unload the rectal veins by freeing the portal circulation, combined locally with weak tarry lotion, one of the best of which is Wright's Liquor Carbonis Detergens, a well-made alcoholic solution of Coal Tar, suitably diluted."

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